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Geology of the Utica Quadrangle, New York

T.P.

By

MARSHALL KAY PH.D.

Temporary Geologist, New York State Museum

With a chapter on the Silurian System by
W. L. Grossman Ph.D.

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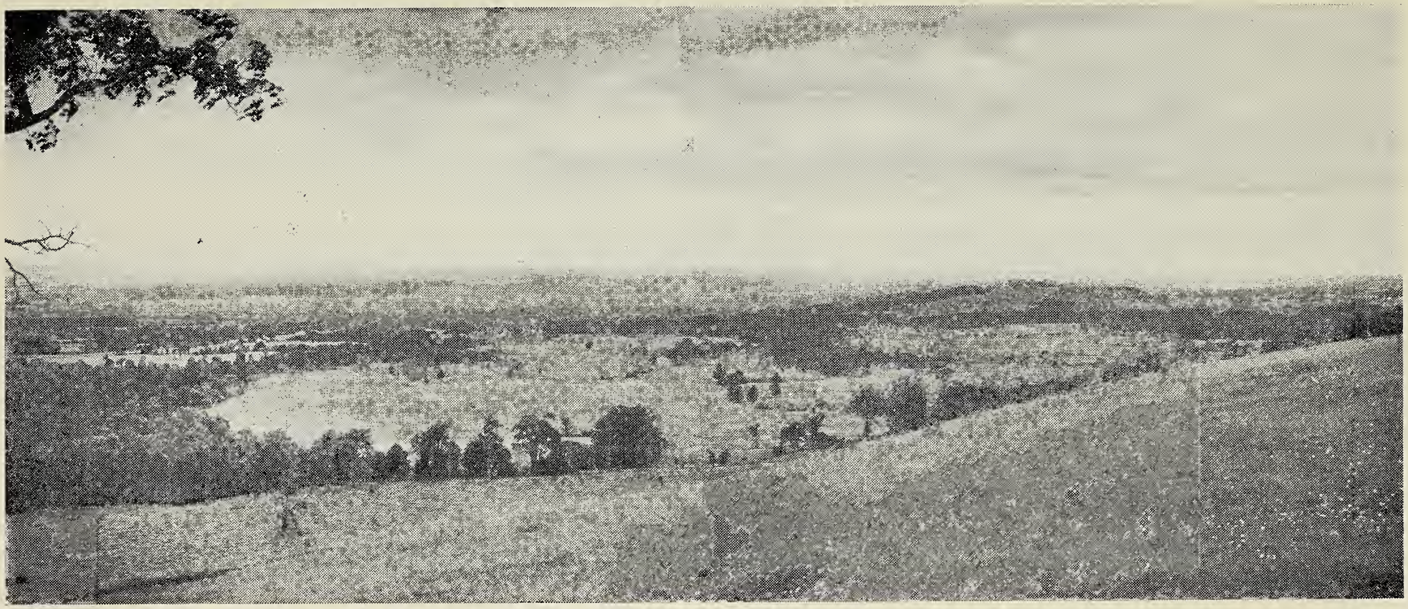

Figure 1 View southwest across the Mohawk valley from the hill west of Hasenclever Hill; Dutch Hill in the middle distance left beyond the Mohawk river, Beech Hill in middle distance right and Utica on the right beyond; ground moraine between branches of Sterling creek in foreground

Geology of the Utica Quadrangle, New York[1]

By

Marshall Kay Ph.D.
Temporary Geologist, New York State Museum

With a chapter on the Silurian System

by W. L. Grossman Ph.D.

INTRODUCTION

The Utica quadrangle, with an area of about 225 square miles, is in east central New York, between the Adirondack mountains and the Allegheny plateau (figure 3). The Mohawk river flows southeastward across the southern half by Utica, Frankfort and Ilion, and West Canada creek, in the extreme northeast, passes Poland and Newport (figure 2). The line separating Oneida and Herkimer counties divides the quadrangle into northwest and southeast parts of similar area.

The bedrocks are sedimentary, and dip gently southwestward (figure 4). The three principal belts are reflected in the principal topographic divisions. Ordovician limestones underlie the lower elevations near West Canada creek, which is about 600 feet above the sea on the east. A broad central belt is of Ordovician shales and sandstones, the latter capping a discontinuous north-facing cuesta, the Deerfield hills, reaching an elevation of 1639 feet in Harter hill (figure 4). This range is a southeastern extension of the Tug Hill plateau that lies between Lake Ontario, the Black and Mohawk rivers. South of the Mohawk is an escarpment of Silurian sandstones and overlying shales, exceeding 1500 feet in the south, and forming the northern margin of the Allegheny plateau. The Mohawk river, with an elevation of less than 400 feet at Ilion, lies in an intercuesta lowland and has cut through the sandstones that cap the area to the north into the less resistant shales beneath.

These principal relief features had been segregated by the more rapid removal of the less resistant rocks by the streams that drained the region prior to the coming of the glaciers of the Pleistocene age. With the advance and later melting of the ice, till came to mantle the bedrock and lakes formed between the ice front and the

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[1] Manuscript submitted April 1943.

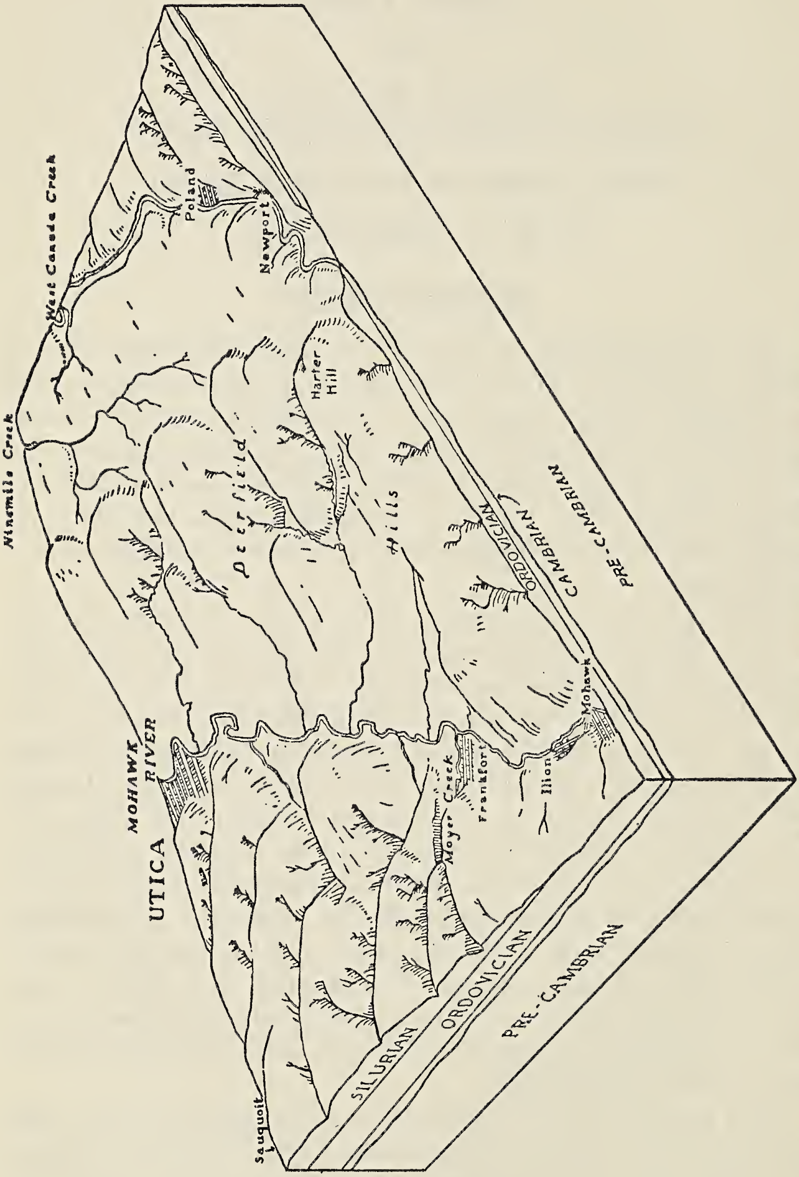


Figure 2 Block diagram of the Utica quadrangle

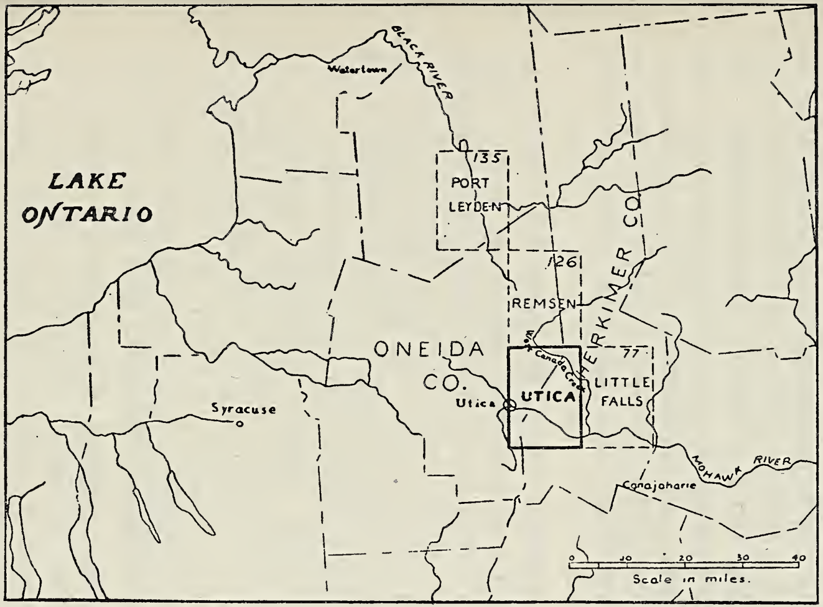


Figure 3 Outline map of part of New York State, locating the quadrangle

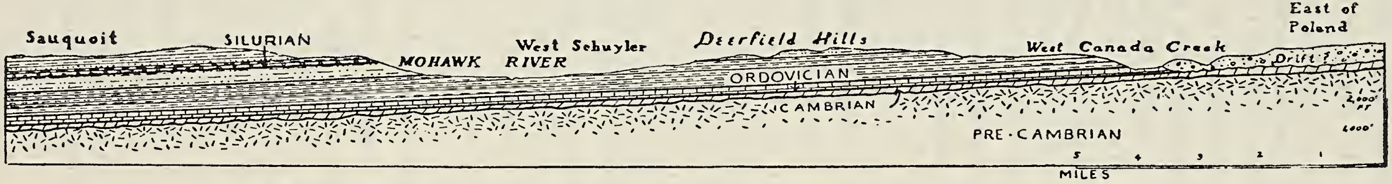


Figure 4 Structure section from northeast to southwest across the quadrangle

higher hills. Streams carried materials from the waning ice, forming deltas along the margins of the lakes; and finer material settled in the deeper waters filling the old stream valleys. In more recent times, the present streams have removed some of the unconsolidated materials and in limited areas have reached the underlying bedrock. Remnants of the lake plains persist, however, as terraces at higher elevations and there are occasional remnants of the wave-cut cliffs that bordered them.

The region lies structurally along the northeastern margin of the Allegheny synclinorium and is the southeastern part of the Lake Ontario homocline of beds dipping gently away from the block mountains of the Adirondacks and the southern Canadian Shield. The principal sediments, of Ordovician age, were laid to the west of the Adirondack axis, a situation that is reflected in the changing character of the rocks laterally; the quadrangle is remarkable for the great contrast in the middle Ordovician rocks between its northwestern and southeastern limits.

The first American geologists visited the region in the early years of the last century and were interested particularly in the section exposed in the Trenton Falls gorge of West Canada creek, beyond the northern margin of the map sheet. Many of the fossils were described in the reports of the first state survey. In later years, several geologists restudied the classic sections along the stream (Darton, 1894; White, 1896; Prosser and Cumings, 1897; Raymond, 1903). In the following years, the State Museum published reports on the quadrangles to the east (Little Falls, Cushing, 1905) and to the north (Remsen, Miller, 1909). The shales south of the Deerfield hills have been studied more recently (Ruedemann, 1925); the Silurian rocks on the south have been less adequately studied, though some of the beds and sections have been discussed (Hartnagel, 1906; Sanford, 1936).

Limited operations for the mining of iron ore were carried on in the early days southeast of Utica. Limestone was quarried for local use in the valley of West Canada creek, and is now crushed for road metal and concrete. Sand and gravel resources are abundant and there are many large operations along the Mohawk valley. Gas, and even oil, have been encountered in a few wells but never of volume or quality to prove valuable; one of the most useful results of the present survey has been to emphasize the improbability of significant resources of these substances. Water has never been obtained in quantity from deep wells within the quadrangle, inasmuch as there is a large supply in the streams flowing from the Adirondack watershed and from the waters of the smaller streams within the area.

The quantity and permanence of water in local wells is dependent on specific conditions in their vicinity.

The writer has mapped that part of the area lying northeast of the Deerfield cuesta and verified the results in the remaining portions. The detailed mapping of the belt southward to the Mohawk has been undertaken by C. E. Prouty and A. L. Bodenlos. W. L. Grossman has prepared the map of the area south of the river and the report on the Silurian rocks. Inasmuch as there is limited exposure, areas of rock that have been seen are separated by a distinctive pattern; there will be a limited number of other exposures that will not have been visited because it would have required an uneconomical expenditure of time to have surveyed every part of the map sheet. The northeastern corner of the area is deeply drift covered, and it has been thought unreasonable to project bedrock outcrop belts into the hills that probably lack the rocks. Elevations of contacts have been recorded by leveling to recorded elevations, to topographic points and by aneroid; their accuracy is limited by the procedures utilized. The faunal lists for the limestone formations have been prepared principally by L. C. Craig.

The Director of the State Museum during the period of field study in 1940 to 1942, Dr C. C. Adams, by his interest accelerated the preparation and enhanced the character of the report. C. A. Hartnagel contributed comments that are appreciated. And Dr T. Wood Clarke of Utica assisted from his understanding of the glacial features of the region. The published work of Dr Rudolf Ruedemann has served to advantage in the interpretation of the difficult shale terrane along the Mohawk river.

STRATIGRAPHIC GEOLOGY

GENERAL SUMMARY

The rocks exposed within the Utica quadrangle are of Cambrian, Ordovician and Silurian ages. pre-Cambrian rocks are exposed within a mile of the boundary at Middleville (Cushing, 1905), and similar igneous and metamorphic rocks would be encountered at depth beneath the entire area, forming the floor on which the sedimentary rocks lie. They have been reached in a few deep wells along the Mohawk river.

The classification of the formations and their subdivisions is as follows:

TABLE I

Classification of Rocks in the Utica Quadrangle

SYSTEM— SERIES— Group	FORMATION— Member	Character of rocks	Thickness in feet
SILURIAN	CAMILLUS	Limestone and shale	100 preserved
CAYUGAN	VERNON	Red and green shale	200
	.... disconformity		
NIAGARAN	LOCKPORT (?)	Dark, limy shale	55
Lockport	HERKIMER	Sandstone	80
Clinton	WILLOWVALE	Shale	30
		Oölitic iron ore bed	2
	SAUQUOIT	Sandstone and shale	160
	ONEIDA	Conglomerate	25
	.... disconformity		
ORDOVICIAN			
CINCINNATIAN			
Eden	FRANKFORT		
	Moyer	Shale and sandstone	400
	Hasenclever	Sandstone and shale	50
	Harter	Gray shale	100
MOHAWKIAN			
Trenton	UTICA	Black shale	400[1]
	.... disconformity		
	COBOURG		see note below
	Steuben	Coarse limestone	60
	Rust	Limestone and shale	115
	DENMARK		
	Russia	Argillaceous limestone	70
	Poland	Argillaceous limestone	60
	SHOREHAM	Limestone and shale	55
	KIRKFIELD	Limestone and shale	45
	ROCKLAND	Limestone	10
	.... disconformity		
Black River	LOWVILLE	Limestone	40
	.... disconformity		
CAMBRIAN			
ST CROIXAN	LITTLE FALLS	Dolomite	70 exposed

[1] In southeastern part of quadrangle: undivided black shale between Russia limestone and Harter shale, 750 feet; includes uppermost Canajoharie shale at base and succeeding Utica shale.

The rocks within the quadrangle are almost wholly layers of sediment that were laid in shallow seas and were originally practically horizontal. The entire thickness is about a half mile; and the lowest exposed rocks lie on granites and gneisses, not exposed within the quadrangle, but displayed a mile to the east near Middleville. If one were to drill a well starting in the uppermost layers, in the Camillus formation, in the southwestern part of the area, he would penetrate about a half mile before reaching layers like those that lie on the granite in the vicinity of Poland and Newport in the northeast. These latter are about 600 feet above the sea at Poland, but more than 1000 feet below sea level in the southwest, so that along a connecting line, the layers descend about 100 feet for each mile of distance. As a whole, the rocks form plates of rather uniform thickness, successive plates differing in character, and the whole, originally nearly horizontal, now tilted gently southwestward.

There is no single place where all can be seen. But one can see nearly all the formations in traverses in three localities in and near the quadrangle. The lowest rocks, from the basal sedimentary layers to the lower part of the Frankfort formation, show in the vicinity of Newport and Middleville on West Canada creek, extending to the top of Harter hill. Some of the rocks of the Trenton group are not present in these localities but are well displayed at Trenton Falls, just north of the northwestern part of the quadrangle. And the Frankfort formation and overlying Silurian rocks are shown along Moyer creek and its principal southern tributary from Frankfort to the southern boundary of the area.

The discussion of the rocks will be presented in two forms. First, a limited number of sections wherein the entire sequence of units can be seen will be described, so that one can examine the units in a minimum of representative exposures. In the succeeding chapter, the formations and members will be described with reference to their distribution throughout the region.

REPRESENTATIVE SECTIONS

Introduction

The stratified rocks within the quadrangle have a thickness of about one-half mile. The following discussion is presented as a guide to enable an observer to see virtually the whole of the sequence on a tour that could be made in two days, the first day along the valley of West Canada creek in the vicinity of Newport, and the second day south of the Mohawk river between Frankfort and Utica. Anyone desiring fuller knowledge of the character and changes in the separate stratigraphic units will need to visit more scattered exposures that are described in the succeeding chapter.

Vicinity of Newport

The distribution of exposures in the vicinity of Newport and Harter hill within the quadrangle is shown on the geologic map (in pocket). The localities that will be referred to, some of them in the Little Falls quadrangle, are represented on the outline map (figure 5) and the sections in the accompanying diagrams (figure 6). The pre-Cambrian rocks, granite, syenite and gneiss, are not present in the quadrangle but are well shown in exposures along West Canada creek at Middleville (figure 7). The Little Falls dolomite is displayed in the bed of the creek below the dam at Newport and in the nearby railroad cut; the contact with the overlying Lowville can be seen in the bed of Buttermilk and City brooks southeast of the village. The Lowville and Rockland are best shown in the quarry a mile northwest of Newport; the contact with the Kirkfield, in the quarry

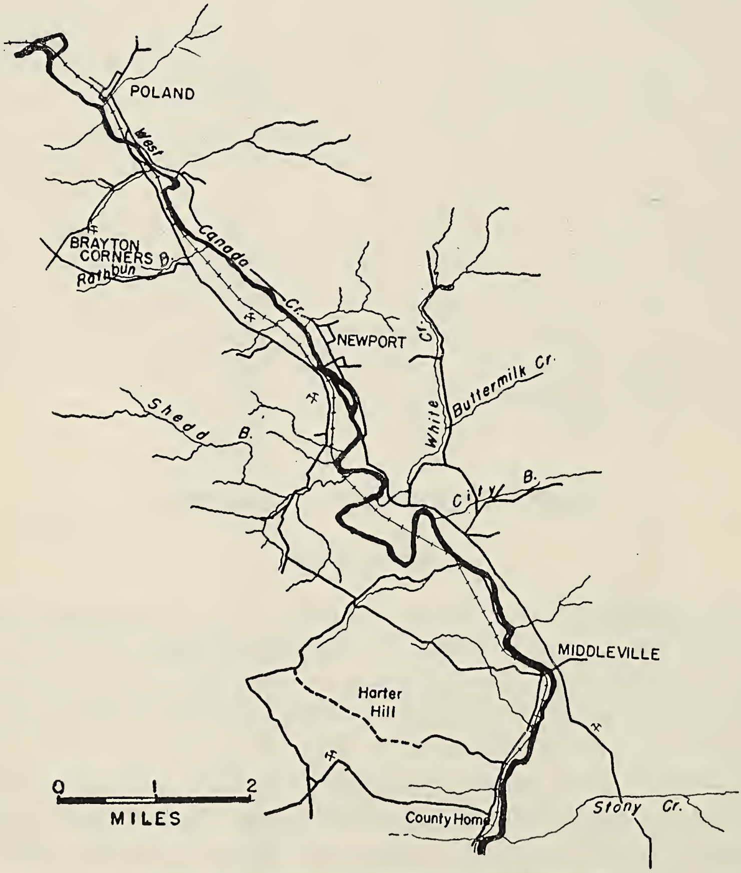
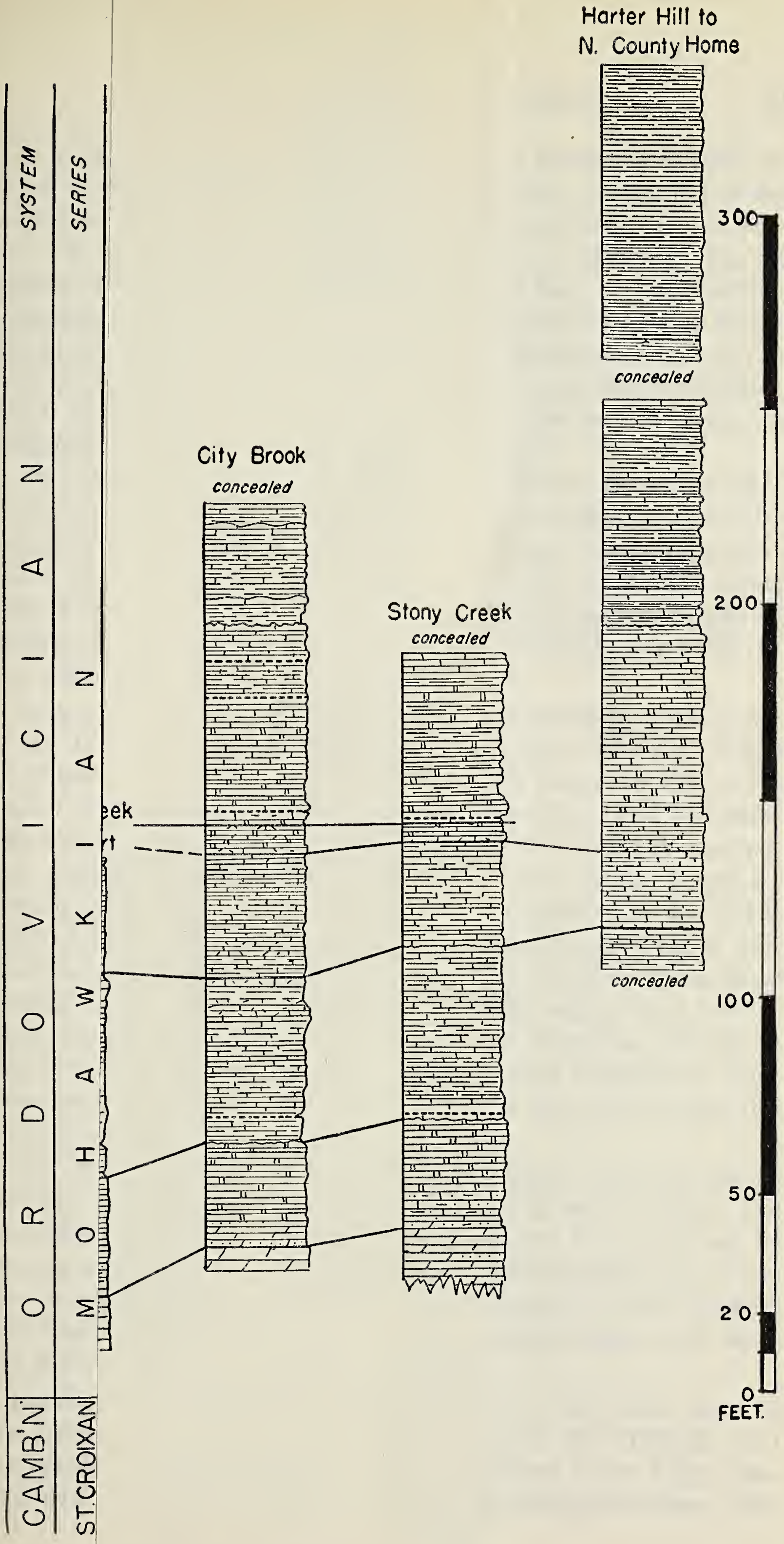


Figure 5 Map of the region around Newport



port and Harter Hill

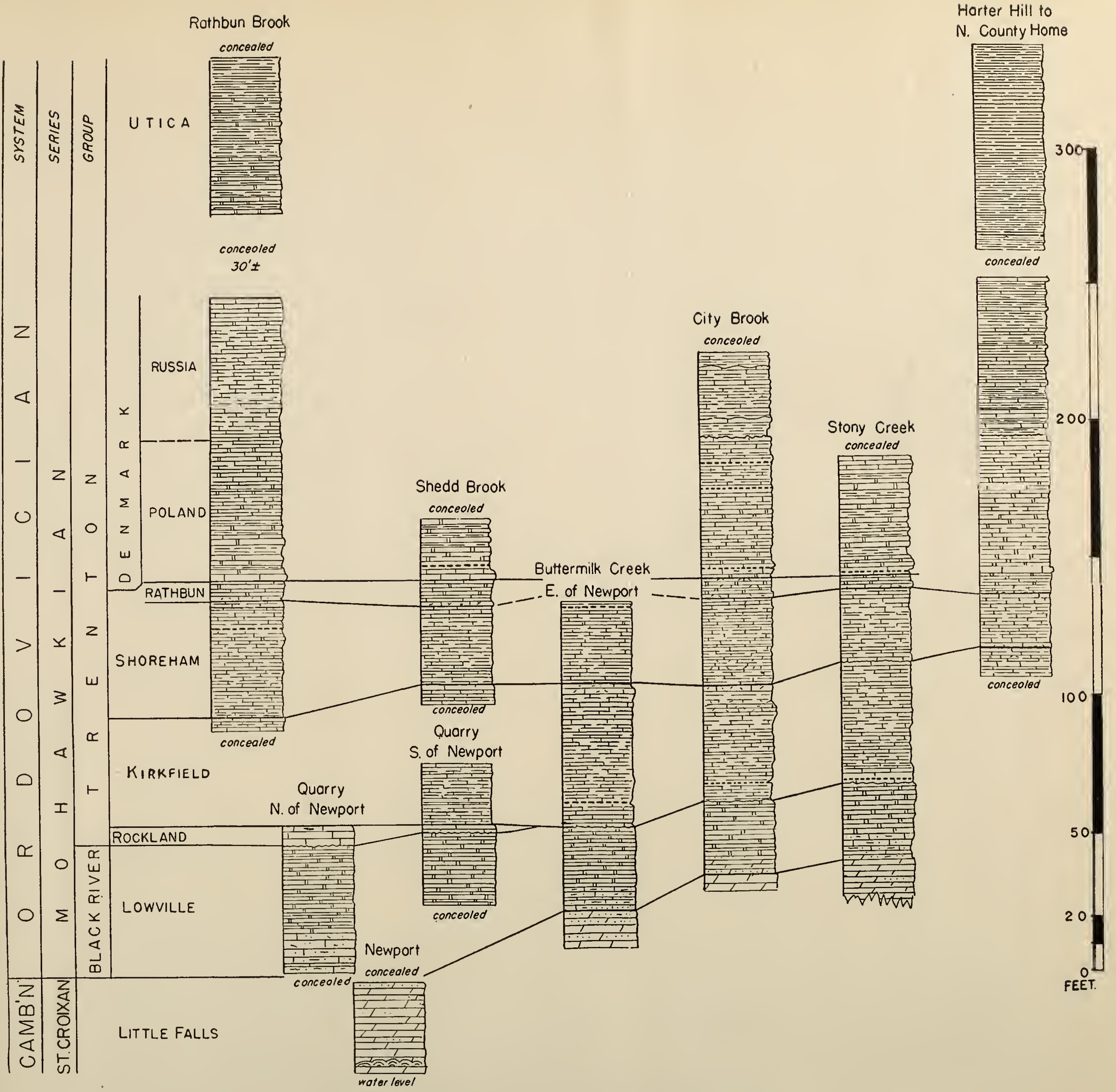


Figure 6 Sections in the vicinity of Newport and Harter Hill

just southwest of the village. The Kirkfield formation is fully exposed along Buttermilk, City and Stony creeks, the section at the second locality being most accessible. The succeeding Trenton beds are well shown on Rathbun brook, northeast of Newport; but the section is more complete and extends to the base of the Frankfort formation along the stream north of the road north of County Home, southwest of Middleville. Inasmuch as practically the whole can be seen in two traverses, the first from Newport to the head of Rathbun brook and the second along County Home—Harter Hill brook, description will be principally of these two sections.

The Little Falls dolomite forms heavy ledges in the creek below the dam and bridge in Newport. There are a number of reefs of a calcareous alga *Cryptozöon* that form mounds and domes in the dolomite. In the railroad cut to the west beside the station, the higher beds of the Little Falls (figure 8) have some sandy beds and there are cavities containing crystals of quartz that are locally known as Herkimer diamonds.

Less than a mile to the north, west of the railroad, is the quarry of the Herkimer Stone company, in which about 50 feet of ledges are shown. The Little Falls dolomite probably forms the floor of the quarry, but is ordinarily concealed. The succeeding Lowville formation is separable into two parts. The lower 14 feet is of buff-weathering, impure, muddy and sandy rock; one or two similar ledges are present in the base of the overlying upper member, 28 feet thick. Most of this upper Lowville is of white-weathering, platy, rather pure limestone that has been extensively used in the buildings in the West Canada Creek valley (figure 9). Some of the ledges have rod-like white calcite structures that are worm borings, *Phytopsis*. The Rockland is a dark, irregularly fracturing, somewhat fossiliferous limestone having a few nodules of black chert or flint; about eight feet is present in the quarry.

The Rockland limestone and underlying upper Lowville can be followed northward along the railroad for a half mile or more. The more shaly Kirkfield limestone has been removed from their top by streams and the glacier, and the latter has formed grooves in the surface of the Rockland. There is a good exposure of the Kirkfield, with interbedded shaly limestone and heavy sugary ledges, at the limekiln along the near-by road (figure 10).

Rathbun brook passes beneath the highway a half mile south of this roadside cut, and the uppermost five feet of the Kirkfield form the lowest exposed ledges above the road. These heavy ledges contrast with the dark, muddy limestone of the overlying Shoreham. One would need to go a mile east of Newport to see full exposure of the Kirkfield formation on Buttermilk creek, or to City brook, farther south. In each of these places, the contact of the Kirkfield shaly beds is with the more resistant, heavier-ledged Lowville, for the Rockland is absent. In each, there is a three-inch clay in a deep re-entrant a few feet above the base of the Kirkfield; this is an altered volcanic ash bed, a metabentonite and is normally present in sections throughout the lower Kirkfield, though absent in the quarry south of Newport, where three feet of Rockland intervene between the Kirkfield and Lowville. Buttermilk and City creeks (figure 11) have falls over the more resistant, heavy-ledged, higher Kirkfield; these heavy ledges have large ripplemarks, one well shown above the falls on Buttermilk creek.

The five feet of Kirkfield limestone exposed on Rathbun brook is overlain by 52 feet of the Shoreham limestone, mostly of dark, shaly, impure limestone with thin limestone ledges in which the trilobite *Cryptolithus* with its pitted border is frequent. The stream cascades over the beds from a platform 25 feet from the base of exposure; there is a re-entrant six feet above the platform. The heavy ledge of sugary limestone about ten feet higher forms the base of the Rathbun member of the formation. The Rathbun is of dense, black, fine-textured limestone, gray, sugary limestone and intervening dark mudstones, the top being at the base of heavy dark ledges, with many rod-like cephalopods, that form the top of the cascades. The member has a thickness of about eight feet.

The succeeding limestones of the Denmark formation, Poland member, contrast in lacking sugary beds. Normally there is a thin clay, metabentonite, two to five feet from the base of the Poland but it is either absent or concealed on Rathbun brook. The rocks of the Poland and Russia members of the Denmark are more clearly shown in other sections, particularly at Trenton Falls, which will be discussed later but they are fairly well shown on Rathbun brook through 100 feet to exposures between the two bridges farther up the stream. In the lower part, many of the beds are rather thick, dense, black, fine-textured limestones with well-preserved specimens of cephalopods (principally *Geisonoceras*), gastropods or snails (principally *Sinuites*), and trilobites (*Calymene*). Higher, as in the cascades below the first bridge, they are dark, muddy limestone; at and above the bridge, poorly preserved cephalopods are very common.

There is a long gap in exposure from below the second bridge to quite a distance above it. There is sufficient rise in the elevation to accommodate some 30 feet of unexposed rocks; these could be of the

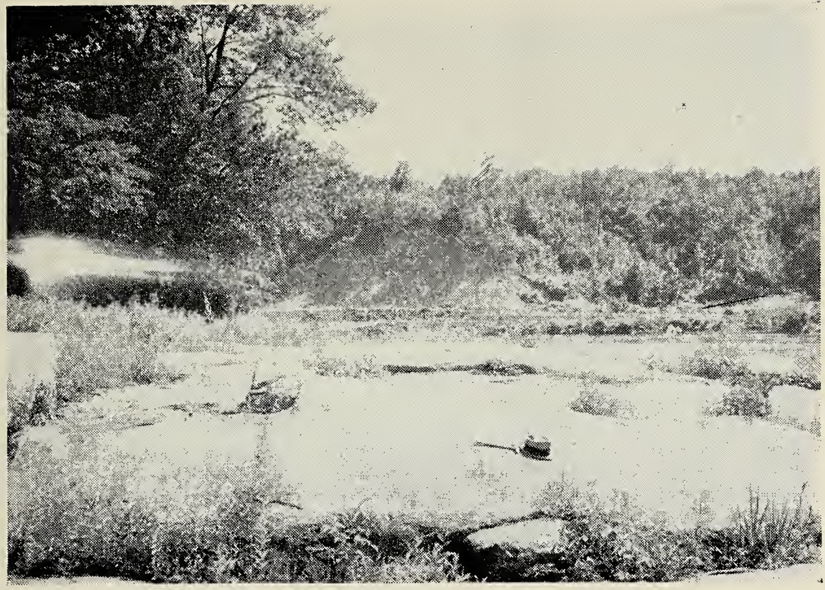


Figure 7 Pre-Cambrian syenite along West Canada creek above Middleville; bluff of gravel overlain by laminated clay in background

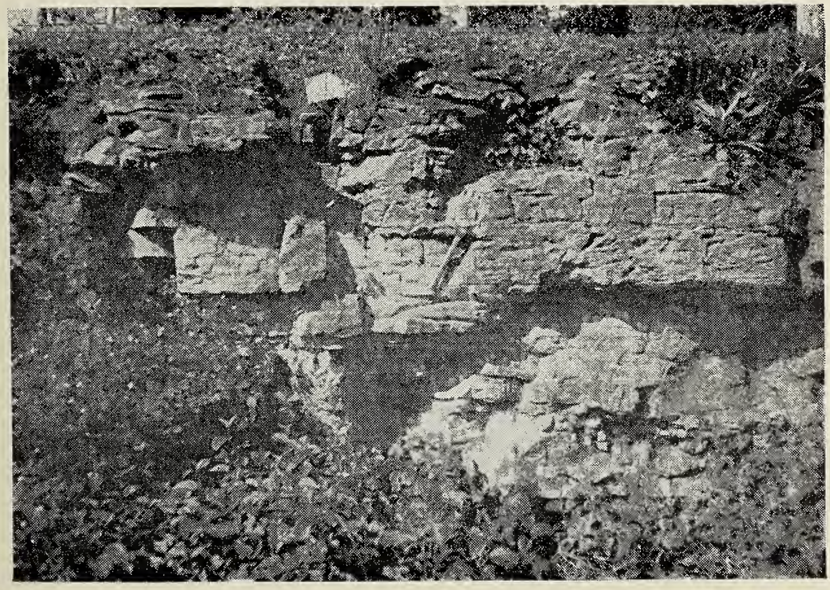


Figure 8 Upper Cambrian Little Falls dolomite in railroad cut at Newport

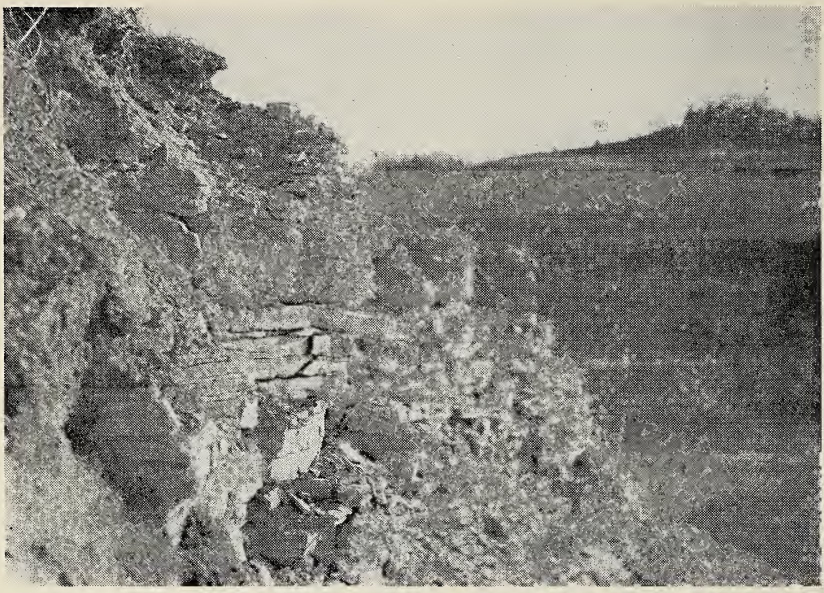


Figure 9 Lowville limestone underlying Rockland limestone; quarry northwest of Newport

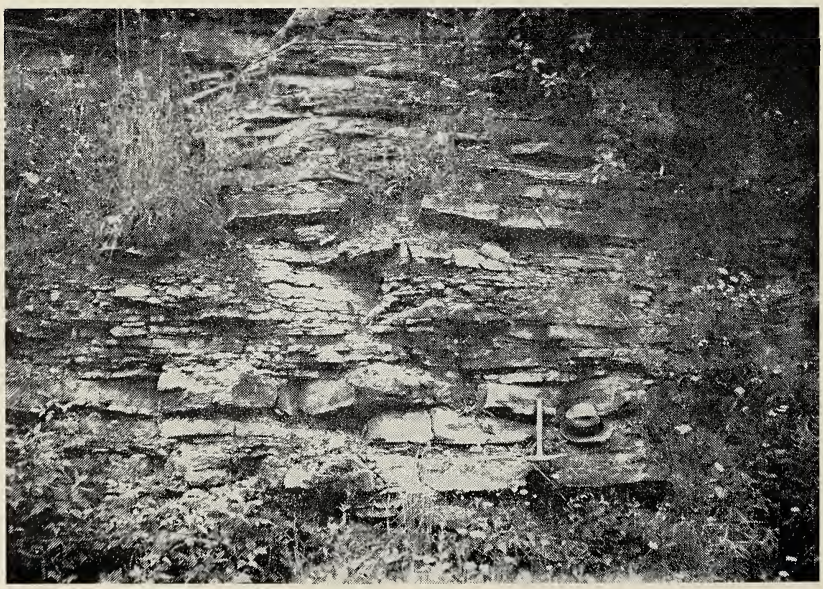


Figure 10 Kirkfield limestone along road north of Rathbun brook

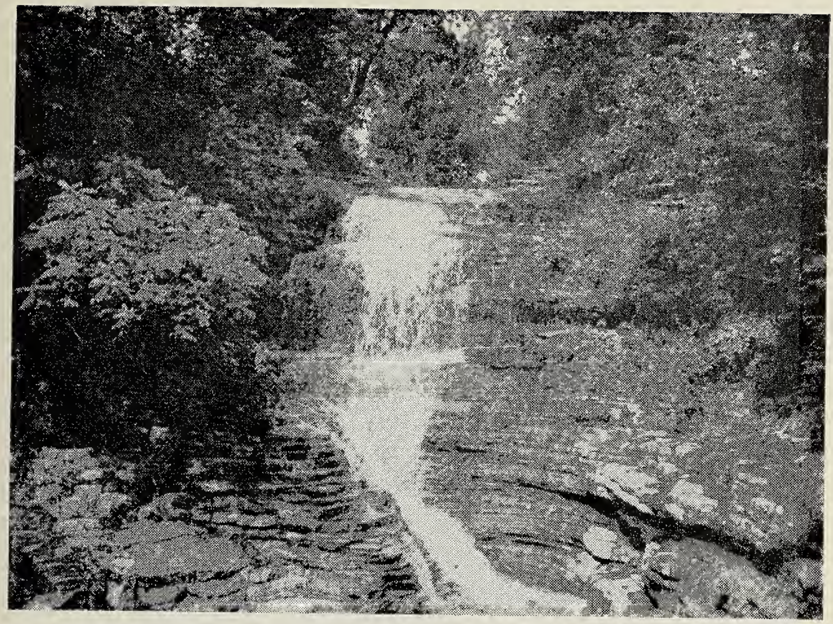


Figure 11 Falls over Kirkfield limestone on City brook; metabentonite at re-entrant; Lowville limestone in cascade below

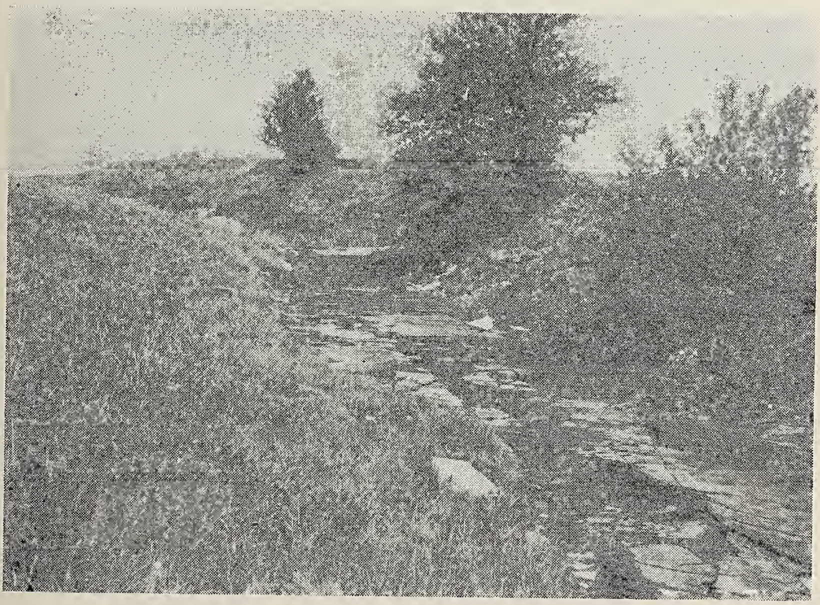


Figure 12 Black shale with calcareous interbeds on Rathbun brook; probably Utica, but possibly upper Canajoharie shale

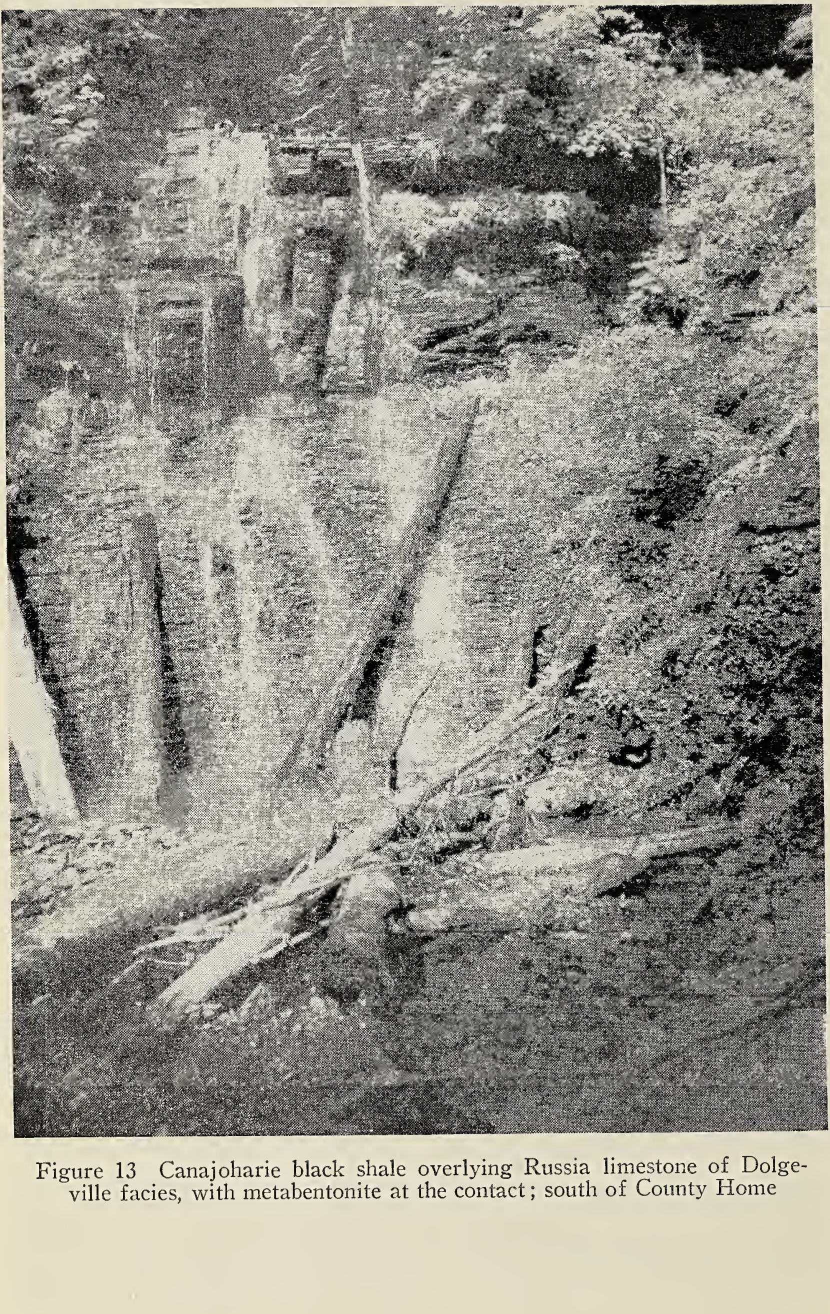


Figure 13 Canajoharie black shale overlying Russia limestone of Dolgeville facies, with metabentonite at the contact; south of County Home

Cobourg, exposed about a mile to the north. The succeeding exposures are first of interbedded dark, dense muddy limestone and platy black shale, with shales becoming predominant upward and being present alone in the upper 15 feet of the 57 feet of exposure (figure 12). Graptolites that were floating organisms with elongate rays, now represented by black, carbonized, serrate fossils, are present in some of the shale beds; with them are small, oval brachiopods (*Leptobolus*) and ostracodes. The upper black shales contain occasional specimens of a Y-shaped graptolite, *Dicranograptus*. These higher black shales are of uncertain classification; though mapped with the Utica, they may be Canajoharie age.

Southeast of Harter Hill

The stream having its source in the col crossed by the road south of Harter hill enters West Canada creek north of the road junction at the County Home southwest of Middleville. The lower course is in the Little Falls quadrangle. There is quite a continuous section of exposed beds from the upper part of the Kirkfield limestone to the base of the Hasenclever sandstone member of the Frankfort, exposed a few feet below the col. To reach the base of the section, ascend the side road north of the County Home to the top of the first terrace and descend northward to the creek. Ten feet of Kirkfield, and 28 of Shoreham including eight feet of Rathbun at the top, are exposed below the heavy basal Poland ledge corresponding to that at the top of the cascades on Rathbun brook; and as in that locality, it forms a platform at the top of rapids. For a thickness of 105 feet there are ledges principally of dense, dark, platy limestone, with fewer fossiliferous beds than at Rathbun brook; interbeds of dark shale become abundant toward the top; the section is in the Poland and Russia members of the Denmark formation. There is then a concealed interval of ten feet, beyond which the rocks are rather uniformly of black, thinly-laminated shale. The lowest are of the Canajoharie formation, and most that succeed are in the Utica, but the rocks are virtually indistinguishable. Graptolites are common in occasional beds and specimens of the trilobite *Triarthrus*.

The concealed interval at the base of the black shale is beautifully exposed in a 40-foot fall a half mile above the road along the second stream south of County Home (figure 13). The upper limestones are slightly folded and there is a thin clay seam at their top in the middle of the cliff; this clay is an altered volcanic ash, a metabentonite. Black shale with occasional limy interbeds continues in a series of rapids above, finally passing beneath soil and drift cover; in at least the lower

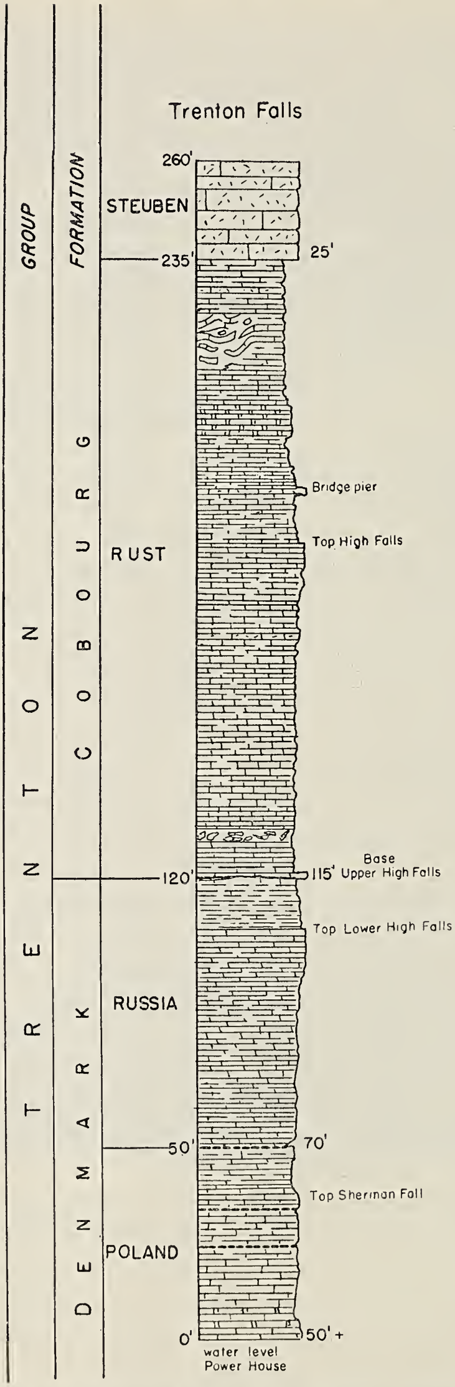


Figure 14 Section of rocks exposed along West Canada creek at Trenton Falls

part, the graptolites show the shale to be in the Fairfield tongue of the Canajoharie formation.

Along the stream north of County Home, the black shale continues through a thickness of about 700 feet. As the stream enters a deep, narrow ravine near its head, there comes to be greenish shale, breaking to small, curved chips; these are in the Harter member of the Frankfort formation. In the upper 15 feet, they come to have very thin sandy interbeds, and at the top pass rather abruptly into the heavy ledges of cross-laminated Hasenclever sandstone member, with intervening gray shale beds. The south side of Harter hill, rising 100 feet above the col to 1640 feet, has abundant brown-weathering fragments of the Hasenclever. Fossils are very rare in both members of the Frankfort that are exposed.

The contact between the members can be seen better in the more accessible abandoned quarry above the sharp turn in the road a half mile south of the col south of Harter hill. It is this contact that has been used in preparing the structure contour map of the area between the south side of the Mohawk and the north slope of the Deerfield hills.

Trenton Falls Section

West Canada creek flows over a series of falls and rapids in a gorge between Trenton falls and Prospect, just north of the quadrangle boundary. The rocks displayed in the section are in part unrepresented in the region about Newport and also of somewhat different character. The divisions shown are present in exposures northwestward from Poland within the Utica quadrangle and in the subsurface of the northwestern half of the area but nowhere are they as well displayed as at Trenton falls.

The section has the lowest beds at the narrows above the powerhouse and the highest in the continuous section, above the dam above Prospect station. Most of the section is not readily accessible but it can be seen from viewpoints along the bluffs west of the chasm (figure 15).

The lowest exposed beds are in the lower part of the Poland member of the Denmark formation (figure 16). Fifty feet of the member are represented, the top being defined as at the deep re-entrant above Sherman fall and at the base of lower High falls (figure 18). There are two prominent re-entrants in the wall of the gorge at the powerhouse and in Sherman fall that have metabentonitic clays. These two clays have been recognized at a few sections as far to the southeast as on City brook (figure 6). High falls has lower and upper falls;

the Russia member of the Denmark formation extends through 70 feet of limestone to the base of the upper falls, where it is overlain by the Rust limestone member of the Cobourg formation. Thus, there are 120 feet of Denmark limestone exposed, including most of the Poland member and all of the Russia member. On Rathbun brook and in the County Home-Harter Hill section, corresponding limestones of similar thickness are directly succeeded by black shales. But at Trenton Falls, there are 140 feet of overlying Cobourg limestones and if the section were complete, some 30 feet or more of additional limestones would intervene below the base of the Utica shale.

The Rust member of the Cobourg has a three-foot ledge of conglomerate ten feet from its base (figure 37) and an even more striking 15-foot ledge of folded and disturbed limestone 15 feet below the top (figure 17), forming the floor of the spillway east of the dam. The member is 115 feet thick and is composed principally of thin beds of shaly limestone in which fossils, particularly the brachiopod *Rafinesquina deltoidea,* are frequent. It is overlain a few feet above the top of the dam by the coarse, heavy-ledged Steuben limestone member of the Cobourg. There is no place known within the quadrangle where the Utica shale can be seen to lie directly on the Steuben but the two rocks are nearly in contact along Nine Mile creek two miles below South Trenton.

Moyer Creek Section

Moyer creek enters the Mohawk river at Frankfort. State Route 171 ascends the stream; about four miles above Frankfort and two miles below Gulph, the principal south tributary of Moyer creek joins the main stream. There are many exposures of the Frankfort sandy shale below the junction and the south fork has fairly continuous exposures of the Silurian formations other than the uppermost, the Camillus.

The first exposures of the Frankfort shale are of beds near the base of the Moyer member and correspond approximately to the ledges at the top of Harter hill; because of the southward dip of the strata, the elevation has decreased about 1000 feet in the nine miles from Harter hill to Moyer creek. There are many exposures of the succeeding Frankfort beds along the road and the adjoining bluffs (figure 20). One in the stream bank to the east of a bridge shows a small fault cutting the sandstones and shales (figure 21). The contact of the Frankfort with the Silurian Oneida conglomerate is excellently shown in the sharp turn in the road at the mouth of the south fork (figure 23).

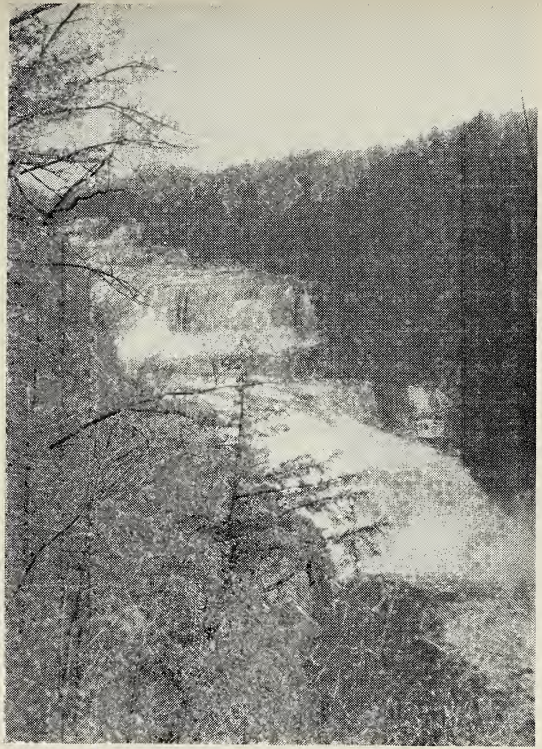


Figure 15 Trenton Falls gorge of West Canada creek; lower and upper High falls with Prospect bridge in distance

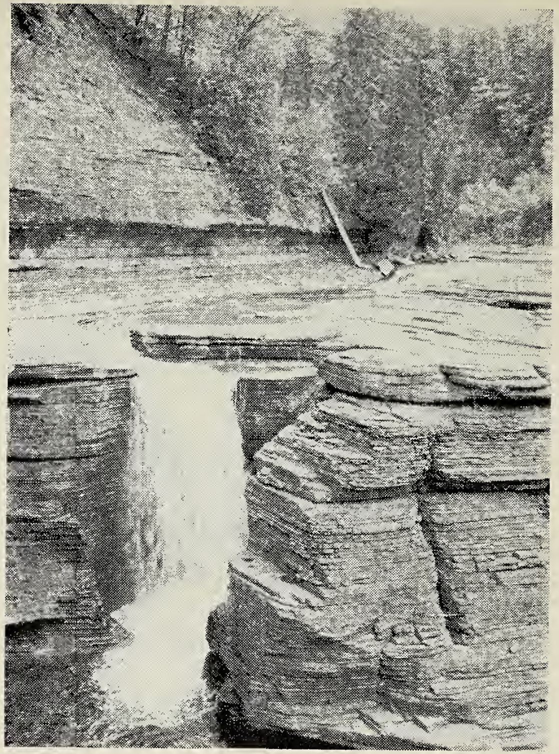


Figure 16 Sherman fall; Poland limestone with two metabentonites in fall overlain at parting above the fall by Russia limestone

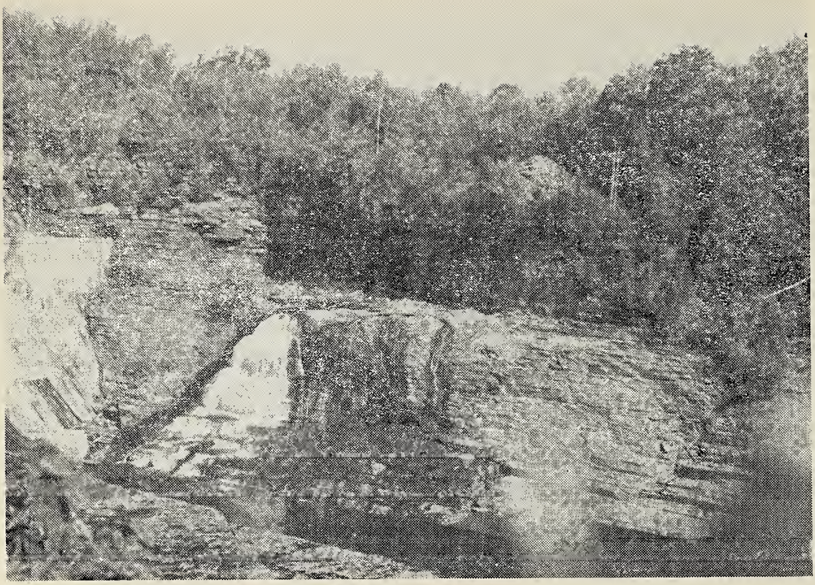


Figure 17 Cobourg limestone above Prospect bridge; Rust limestone with contorted beds in spillway, Steuben, above dam

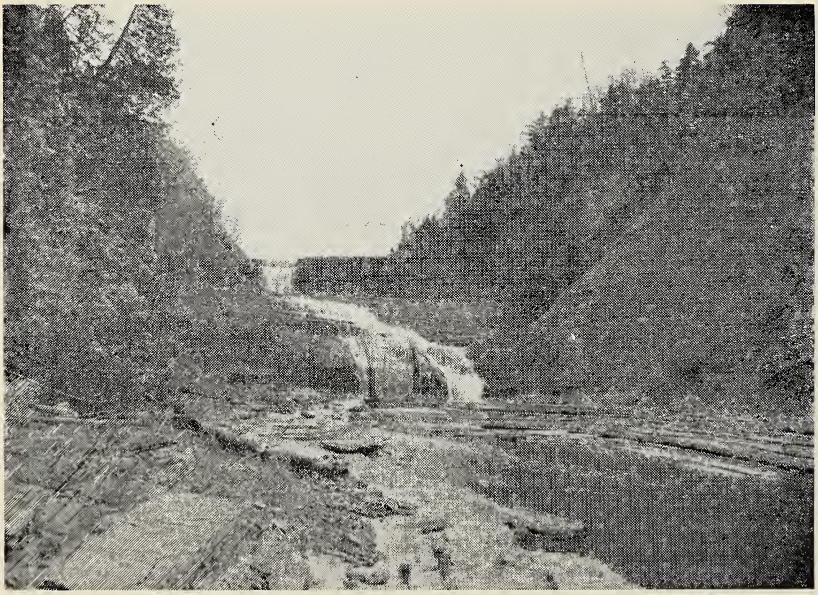


Figure 18 High falls; Poland limestone in foreground; Russia in the lower falls; Rust in the upper falls

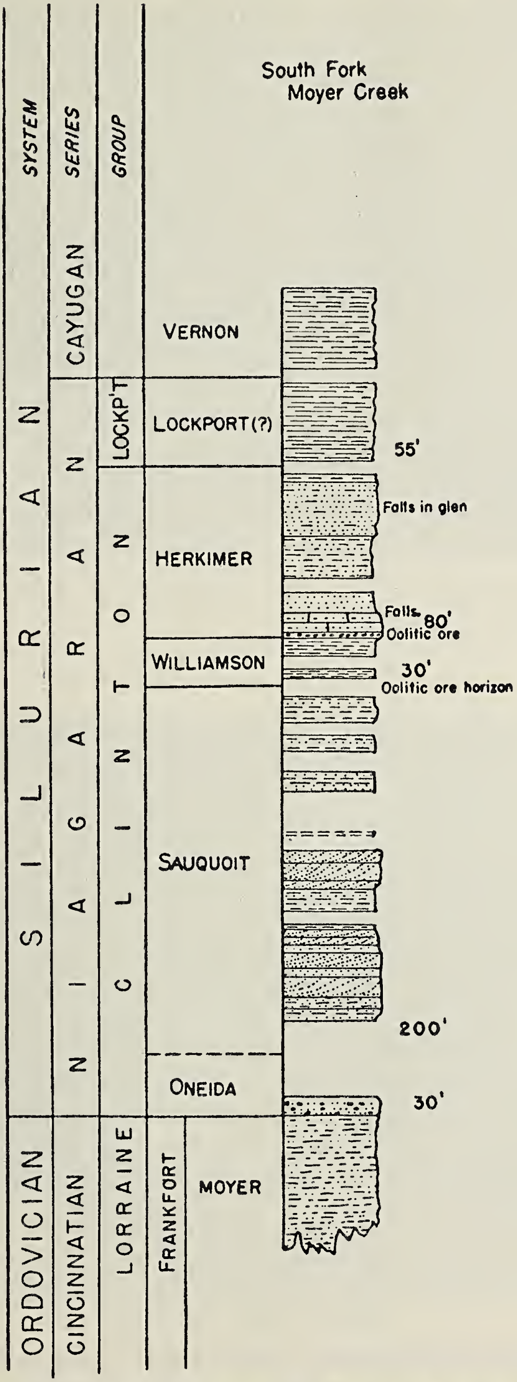


Figure 19 Section of rocks exposed along Moyer and South Moyer creeks

The succeeding Silurian section is along this main tributary. Forty feet of beds are concealed above the ten feet of exposed Oneida. There follow exposures of strikingly cross-laminated sandstones, red, gray and black on fresh fracture (figure 22); these are in the Sauquoit formation and extend with little interruption through 100 feet of beds. There are interrupted exposures for an additional 75 feet of greenish shales and platy sandstones having innumerable trails, ripple-marks and clay-pellet conglomerates. An oölitic iron ore that should succeed is concealed within a ten-foot covered interval. The next exposures, extending into the face of a small falls, are of the green shale of the Willowvale formation. A 15-inch ledge of reddish, iron-oxide bearing sandstone in the face of the falls lies just above the base of the Herkimer formation (figure 25). The Herkimer comprises the somewhat shaly sandstones with beds having abundant bryozoan fossils in the beautiful litle glen with succeeding falls.

The contact of the Herkimer and the Lockport (?) is concealed in a short interval and the latter is well exposed, a platy dark shale, in steep banks on both sides of the stream through a thickness of about 50 feet (figure 24). Then there are about five feet of green shale of the Vernon, followed by about 40 feet of red, poorly bedded and more typical shale (figure 27) to the top of the exposures a short distance below the road crossing the stream near the south boundary of the quadrangle.

In order to complete the section of the rocks exposed in the Utica quadrangle, one must ascend the stream flowing westward into Sauquoit, in the extreme southwest corner of the area. The red shales of the Vernon are exposed in three considerable exposures with intervening covered areas for 180 feet from the first outcrop above the village. Above these is continuous exposure for 100 feet of gray shales with interbedded platy limestones that characterize the Camillus shale (figure 26) and extend to the top of the exposures.

One who has traversed the sections near Newport, that along the County Home-Harter Hill brook and from Frankfort along South Moyer creek, with the addition of the Sauquoit Creek section, will have seen representative and rather continuous exposures of the entire half mile of stratified rocks that lie beneath the Utica quadrangle.

CAMBRIAN SYSTEM

ST CROIXAN SERIES

Little Falls Dolomite

The Little Falls dolomite (Clarke, 1903) is exposed only in three small areas within the quadrangle, along West Canada creek at New-

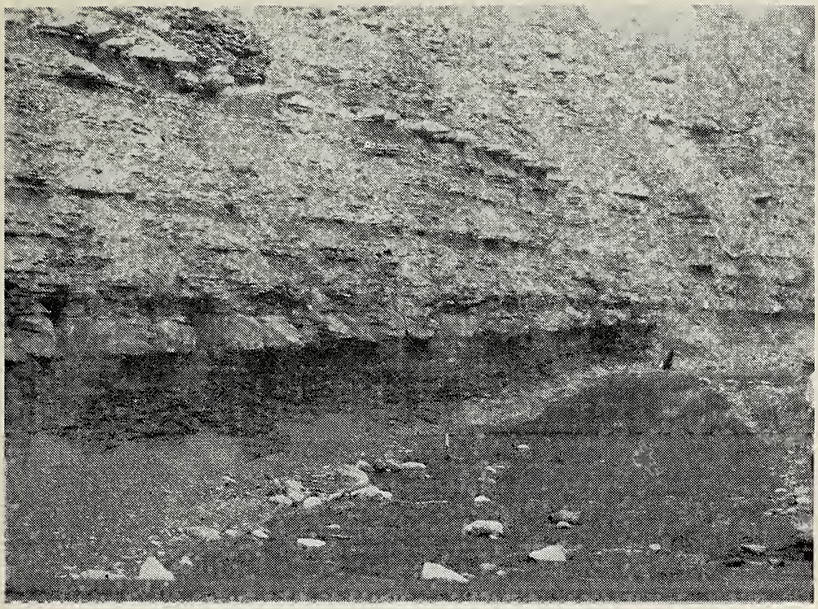


Figure 20 Frankfort formation on Moyer creek

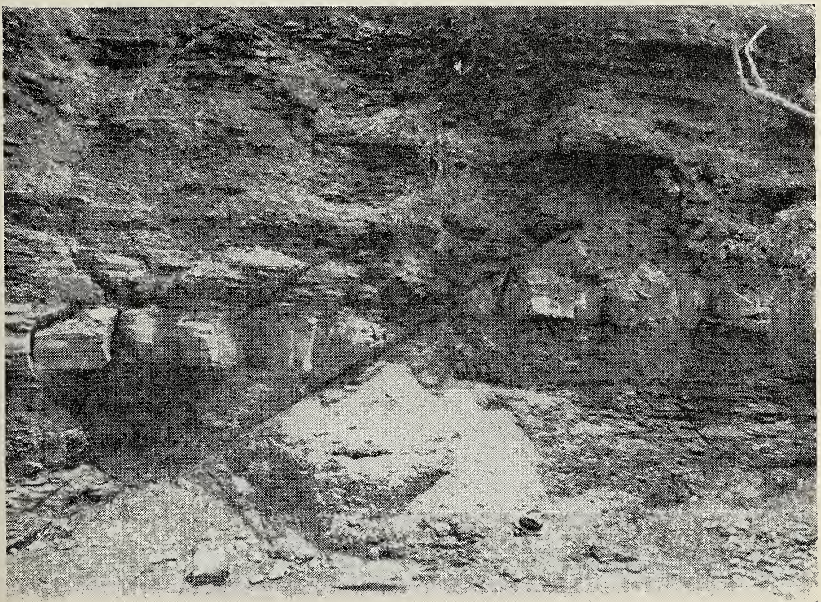


Figure 21 Fault in Frankfort shale and sandstone; Moyer creek

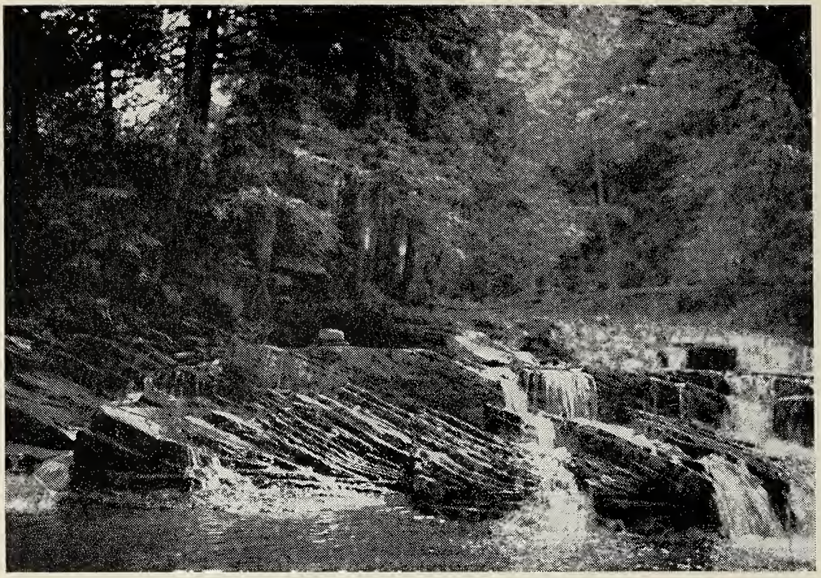


Figure 22 Cross-bedded Sauquoit sandstone; South Moyer creek

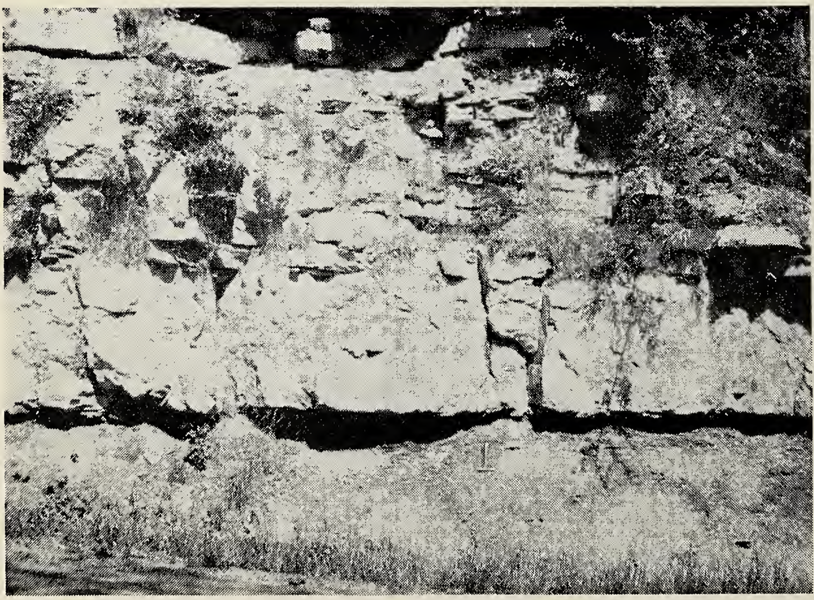


Figure 23 Frankfort shale overlain by Oneida conglomerate; roadside at mouth of South Moyer creek

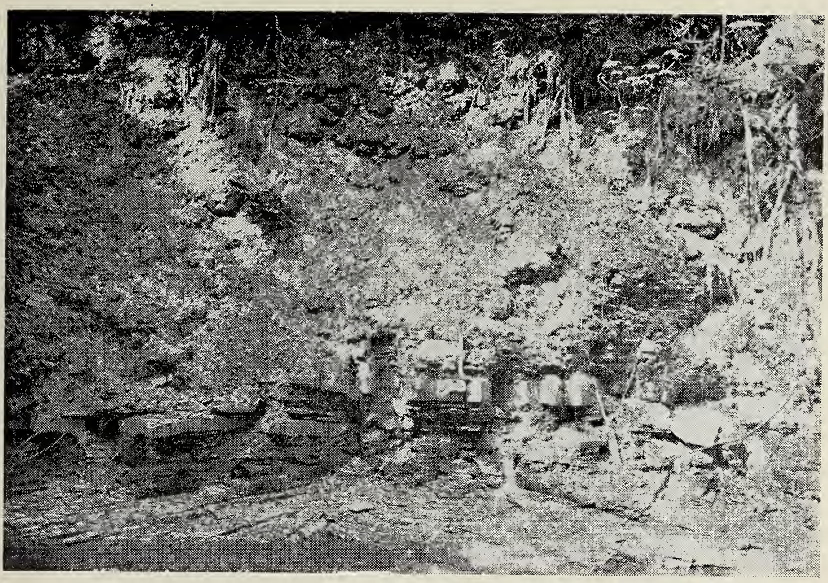


Figure 24 Lockport (?) shale; South Moyer creek

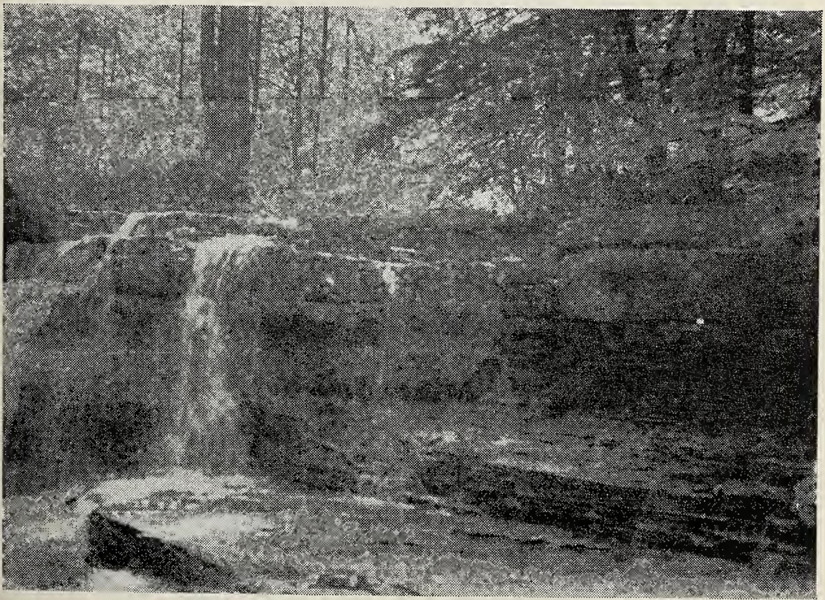


Figure 25 Willowvale shale overlain by basal, hematitic Herkimer sandstone; South Moyer creek

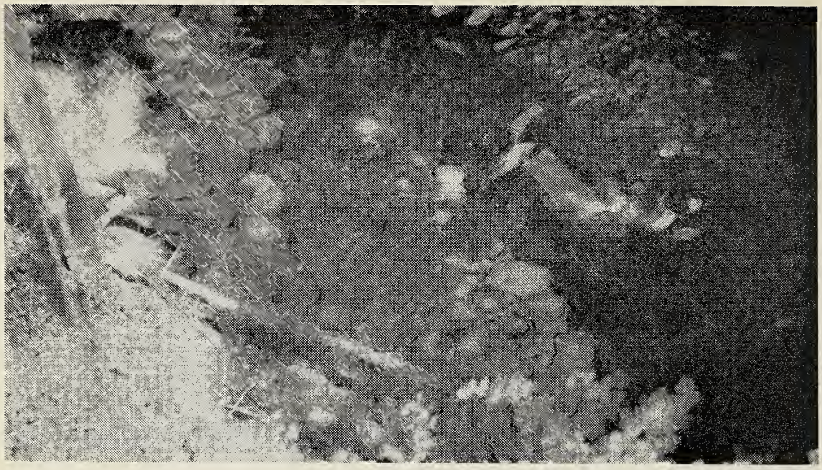


Figure 26 Camillus shale with polygonal jointing; stream east of Sauquoit

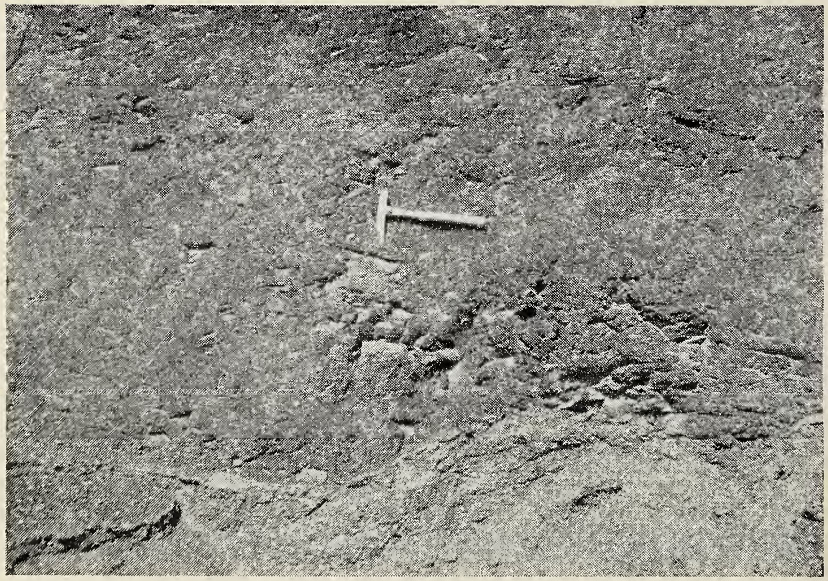


Figure 27 Vernon poorly-bedded red shale; roadside at head of South Moyer Creek section

port, low on the hillside due west of Poland and north of the road junction six-tenths of a mile northeast of Poland; the former is continuous with extensive outcrop in the Little Falls area. The beds, forming the upper part of the formation, are of gray, tan-weathering dolomite in heavy ledges, with intercalated cross-laminated quartz sandstone. Distinctive drusy cavities have doubly terminated quartz crystals that have been called Herkimer diamonds. Forty feet are exposed at Newport (figure 8) and about 70 feet near Poland; at Middleville, where there is exposed underlying pre-Cambrian syenite, the thickness is estimated as 200 feet. Inasmuch as the formation is absent along the Black river north of the area, it is probably thin or unrepresented in the northwest part of the area and pre-Cambrian must be very near the surface at Poland.

A species of calcareous alga, *Cryptozöon,* forms reefs in the dolomite below the dam at Newport. These can be seen to better advantage along City brook where *Cryptozöon* masses are abundant in four feet of dolomites lying about 60 feet below the top of the formation (figure 29); they are common about 20 feet from the top west of Poland. The classification of the Little Falls as Upper Cambrian is based on its continuity to the Saratoga region, where its lower member contains distinctive fossils of the series. In the lower Mohawk valley it is overlain by basal Ordovician Tribes Hill dolomite, and along Lake Champlain nearly 4000 feet of Canadian and Chazyan separate it from the rocks of the Mohawkian that directly overlie it along West Canada creek.

ORDOVICIAN SYSTEM

MOHAWKIAN SERIES

Black River Group

The Black River (Vanuxem, 1842) group of northwestern New York comprises three formations, the Pamelia limestone (about 150 feet), the Lowville limestone (about 60 feet), and the Chaumont limestone (about 25 feet); a comprehensive report has been published by Young (1943). The rocks of this age within the quadrangle are in a limited area along West Canada creek and are classified as Lowville. There are excellent sections within the western border of the Little Falls quadrangle southward to below Middleville that will be discussed for they represent the surface expression of beds lying beneath the eastern part of the Utica area. A thin basal sequence of arenaceous and muddy limestone, dolomite and sandstone may be older than the type Lowville. and of Pamelia age; in view of the doubt as to their classification, they are included in the Lowville.

Lowville formation. The Lowville limestone (Clarke and Schuchert, 1899) is shown excellently in the quarry a mile northeast of Newport (figure 3), where it is separable into a lower member of 14 feet of gray-brown, medium-textured, tan-weathering, heavy-ledged, tough, sandy and muddy limestone, some beds having vertical calcite tubes, and an upper member of 26 feet of gray, white-weathering, very fine-textured, conchoidally fracturing sublithographic limestone or calcilutite with some shaly interbeds. There are a few layers of the white limestone in the upper part of the basal member and a single 19-inch ledge three feet from the base of the upper member is lithologically like the beds below. The upper Lowville is fully exposed in a quarry south of Newport and partially so in that quarry west of West Canada creek above Poland.

The lower member is 13 feet thick on Buttermilk creek, in the extreme southwest corner of Norway township, seven feet along City brook and eight feet on Stony brook, lying in each case with disconformity on the Little Falls dolomite with sandy and magnesian basal beds. The upper limestone member is 22 feet on Buttermilk creek, 19 on City brook and 19 on Stony creek; the Lowville in this character has been seen in all sections along the Mohawk valley except that at Canajoharie, though the thickness is in some cases only a few feet. A three-inch metabentonite, altered volcanic ash, is present 19 feet from the top of the Lowville on City brook, best seen in the quarry south of the stream; it is represented by a prominent parting about 22 feet from the top northwest of Newport.

In the past, the heavy-ledged dark limestone overlying the Lowville at Newport has been referred to the Black River and by implication to the Chaumont. The beds are of Rockland age and worm borings, *Phytopsis,* in the uppermost Lowville ledge beneath are filled with sandy material (figure 26). No Chaumont has been recognized in the area, though inasmuch as that formation passes into beds of facies like the local Lowville in central Ontario, it is conceivable that it may be represented along West Canada creek. The basal beds in the area may be equivalent to the Pamelia, which is present in the upper Black River valley; the presence of a metabentonite at the base of the upper Lowville beds encourages the possibility that precise correlation will be established in the future.

Trenton Group

The Trenton (Conrad, 1837) group gained its name from Trenton Falls gorge of West Canada creek, immediately north of the quadrangle. Only two of the seven formations are represented in that

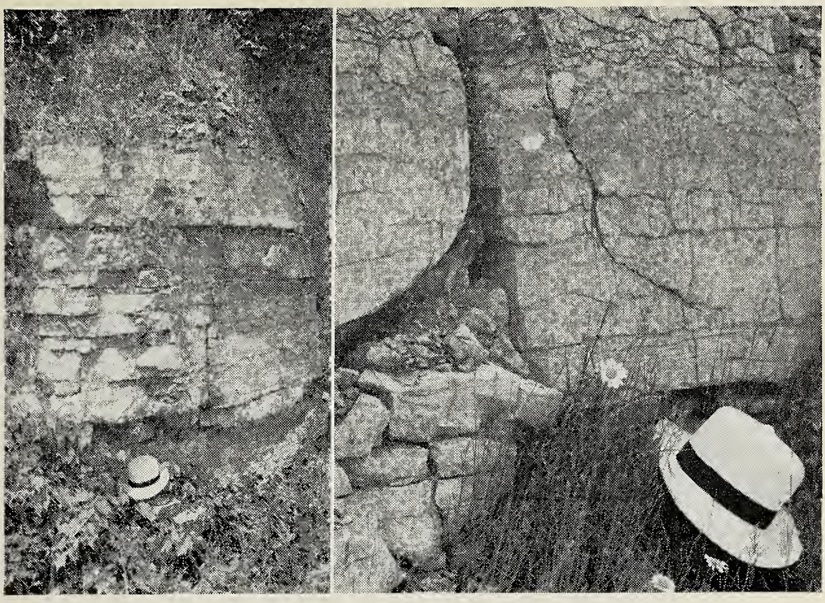


Figure 28 Lowville limestone underlying Rockland limestone; railroad two miles northwest of Newport

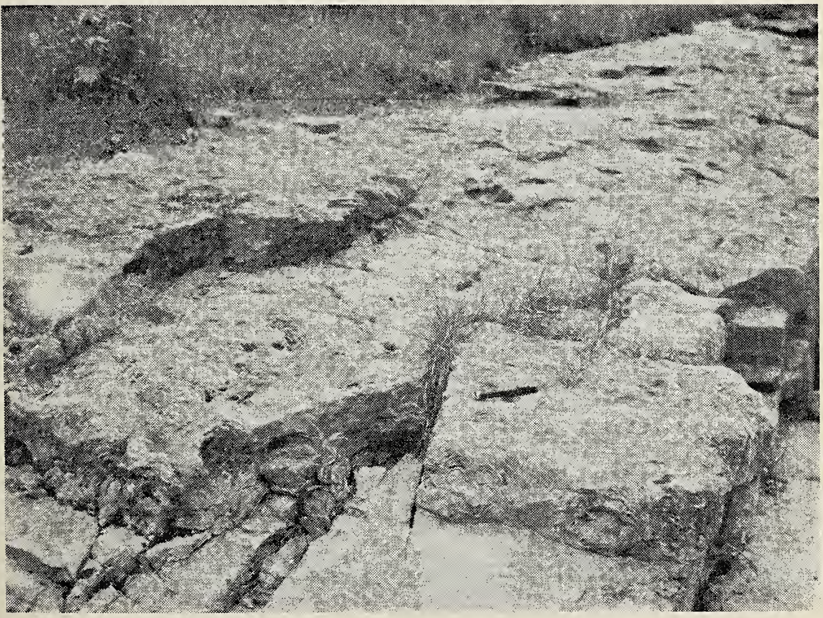


Figure 29 Cryptozöon in Little Falls dolomite; City brook

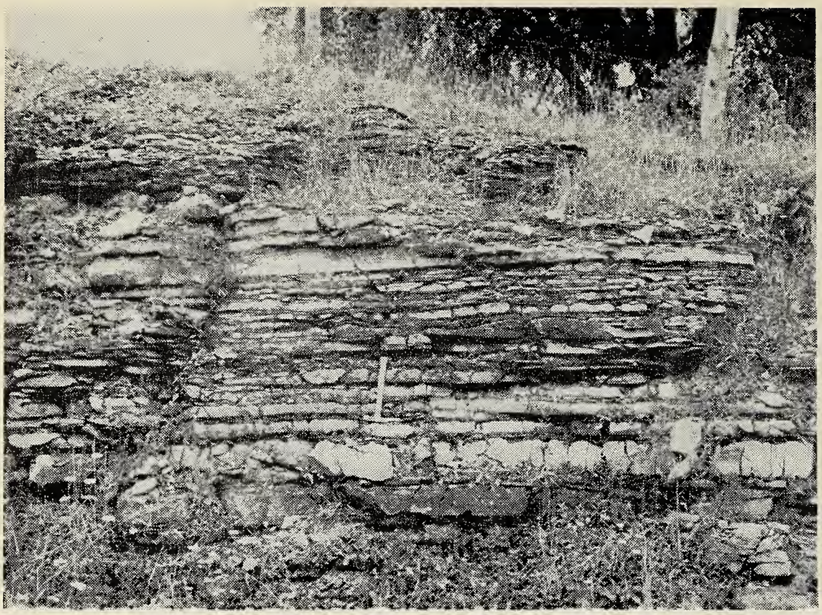


Figure 30 Rathbun member of Shoreham formation, overlain by Poland limestone at top of cut; roadside one mile west of Newport

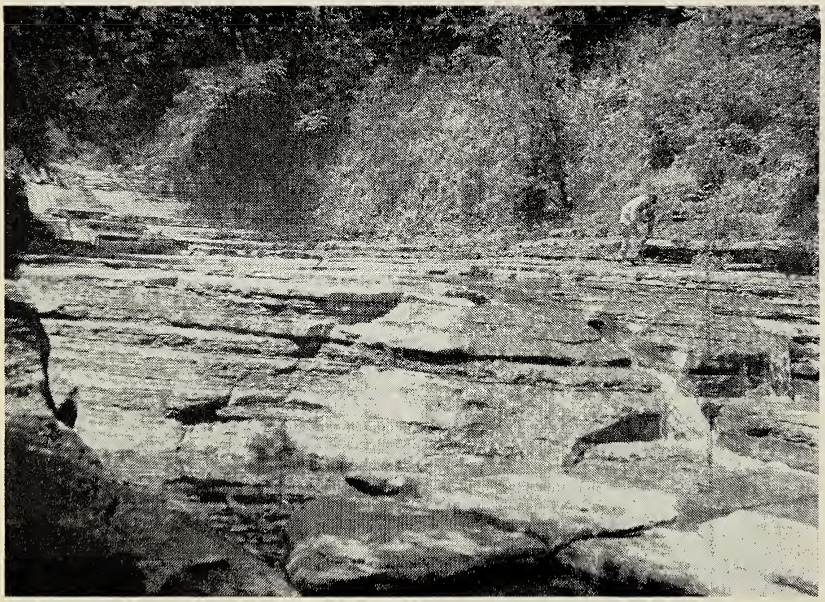


Figure 31 Kirkfield limestone overlain by Shoreham limestone; lower Shedd brook

section, though they include about half the thickness within the immediate area. The fullest development of the group is in northwestern New York and eastern Ontario (Kay, 1937) and most of the units are named from localities in that region.

In the Utica quadrangle, the Rockland, Kirkfield and Shoreham limestones are present but considerably thinner than in the Black River valley. The Denmark, wholly of limestone at Trenton Falls, changes to interbedded limestone and shale in the southeastern part of the area and ultimately to the black shale of the Canajoharie formation in the region to the southeast (figure 33). The Cobourg limestone within the quadrangle is of lower Cobourg (Hallowell) age and extends only to Poland. Beyond a concealed interval in the vicinity of Newport are black shales, principally of the Utica formation, some of which are believed of Cobourg age. The Cobourg limestone of the northwestern area is succeeded by upper Utica black shale that lies on lithologically similar Canajoharie and older Utica shale in the southeast. The contrast between the section of limestones overlying the Denmark in the northwest, and the shales succeeding that formation in the southeast is great; unfortunately exposures are few in the interval in which the changes must take place.

Many of the common fossils from the Trenton formations are shown in figures 65 and 66 at the end of this bulletin.

Rockland limestone. The Rockland limestone (Raymond, 1913) is represented by a maximum exposure of eight feet of black, dark-weathering, heavy-ledged, somewhat black cherty limestone in the quarry a mile northwest of Newport (figure 9) and in adjoining railroad cuts; similar thickness is in the quarry west of Poland, but only two and one-half feet in that south of Newport. It is absent southward along West Canada creek and along the Mohawk river. To the east, there are three feet of similar beds in a quarry four miles northwest of Diamond hill but none in that two miles to the south; and more shaly Rockland beds are 13 feet thick at Inghams Mills, south of Dolgeville. The formation is persistent west of the Black River from Sugar river to the Thousand Islands, reaching nearly 70 feet in the latter region. The limestones in the Utica quadrangle are similar to the equivalent Isle la Motte limestone along Lake Champlain.

The following fossils have been identified from collections made in the exposures at Newport (Craig, 1941):

Columnaria halli Nicholson	f*	Rafinesquina sp.	f
Streptelasma corniculum Hall	f	Rhynchotrema sp. cf. R. increbescens (Hall)	f
Hesperorthis tricenaria (Conrad)	u	Strophomena sp. cf. S. filitexta (Hall)	f
Öpikina inquassa (Sardeson)	u	Strophomena sp. cf. S. foveata Raymond	a
Rafinesquina sp. cf. R. lennoxensis (Salmon)	u		

Ambonychia planistriata Hall	r
Ctenodonta nasuta (Hall)	c
Cyrtodonta sp. cf. C. subangulata (Hall)	r
Endodesma trentonense (Hall)	r
Goniophora carinata (Hall)	r
Modiolopsis sp.	c
Pterotheca anatiniformis (Hall)	f
Vanuxemia sp. cf. V. rotundata (Hall)	a
Whiteavesia (?) sp.	r
Cyrtorhizoceras sp. cf. C. camurum (Hall)	u
Laphamoceras (?) sp.	r
Plectoceras sp. cf. P. undatum (Conrad)	r
Spyroceras arcuoliratum (Hall)	c
Bellerophon sp.	r
Hormotoma gracilis (Hall)	c
Liospira americanum (Billings)	c
Lophospira bicincta (Hall)	u
Subulites sp.	u
Basilicus sp.	r
Bathyurus longispinus Walcott	f
Bathyurus spiniger (Hall)	f
Bumastus milleri (Billings)	c

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* **In this and the following faunal tables, relative abundance is recorded as: a-abundant; c-common; f-frequent; u-uncommon; r-rare.**

The beds of the Rockland formation in the Utica quadrangle are of later Rockland age, equivalent to some part of the Napanee member of the formation in northwestern New York. Though some of the species are present also in Black River formations, others, such as the species of *Rafinesquina,* are diagnostic of the Trenton.

Kirkfield limestone. The Kirkfield limestone (Johnston, 1901), "Hull" of authors[1], is nearly all exposed in the quarry southwest of Newport and the uppermost beds are the oldest exposed in the sections along Shedd brook and Rathbun brook, two miles north and northwest, respectively, of Newport (figure 10). There are excellent and complete exposures on several of the tributaries on the east side of West Canada creek, on Buttermilk creek, City brook and Stony creeks (figure 11). The lower beds are platy, thin-bedded limestones having shaly partings; a persistent thin bed of altered volcanic ash (metabentonite) lies two to eight feet from the base, the clay weathering out to form a deep re-entrant. Succeeding are thick calcite sandstones (calcarenites), some of which have giant ripple marks (para-ripples) and intercalated thinner shell limestones and shales. The resistant, falls-forming upper Kirkfield is most often exposed. The contrast of the crystalline and shaly Kirkfield with the dense underlying formations, whether Rockland or Lowville, is readily observed.

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[1] The name Kirkfield is preferred to "Hull" of the writer's earlier papers. Kirkfield (Johnston, 1911) has precedence over Hull (Raymond, 1914); the type Hull at Hull, Quebec, has the stratigraphic position of the Kirkfield of southern Ontario and northwestern New York, lying between the Triplesia zone at the top of the Rockland and the Cryptolithus zone (Shoreham), the base of the Prasopora beds (Sherman Fall) of Johnston and Raymond, though it is possible that the two are not equivalents (Sinclair, 1942); there has been unfortunate assumption by some authors that all the echinoderms at Hull, Quebec, are from the Hull limestone and synchronous with those described in the type Kirkfield, whereas many are younger.

This may be redefinition of the Kirkfield; it was stated to "include the limestones . . . between the base of the typical Trenton and the top of the Black River group" but was called lower Trenton, though it excluded the Rockland (Coboconk) and included the Prasopora beds that form much of the section at Trenton Falls, New York.

The Sherman Fall (Kay, 1929) was originally defined as "the 'Prasopora beds' or 'Trenton (restricted)' of Raymond, Johnston, and others." It was originally supposed to include beds now classified as the whole of the Russia and the lower half of the Rust limestone at Trenton Falls, 105 feet of beds above Sherman Fall; but subsequent study shows that the "Prasopora beds" correspond to the Shoreham and Denmark formations of the present bulletin.

The thickness is 40 to 45 feet in the vicinity of Newport and Middleville, and approaches or exceeds 30 feet at Jacksonburg, east of Herkimer and in the quarry two miles northwest of Diamond hill. It diminishes to 12 feet and nine feet in the quarries north and northeast of Little Falls and to but four feet of conglomeratic limestone at Inghams Mills, disappearing at Canajoharie. Northwestward, it is about 50 feet northeast of Boonville and 100 feet along the lower Black river. Thus there is a progressive thinning southeastward along the southwestern side of the Adirondack mountains to its disappearance at Canajoharie.

Systematic study has not been made of the Kirkfield in the Utica area but the shell limestone beds are filled with specimens of the brachiopods *Dalmanella rogata* (Sardeson) and *Sowerbyella punctistriata* (Mather) and *Rafinesquina trentonensis* Salmon and *Prasopora* sp. are common. At Inghams Mills, in the Little Falls quadrangle, the writer recognized the following genera on a single bedding surface; *Solenopora, Streptelasma, Rhinidictya, Dalmanella, Dinorthis, Hesperorthis, Öpikina, Parastrophina, Sowerbyella, Hormotona, Liospira, Phragmolites, Subulites, "Cyrtoceras", Geisonoceras* (?), *Bathyurus, Calliops, Ceraurus, Encrinurus, Hemiarges* and *Leperditia.*

Shoreham limestone. The Shoreham limestone (Kay, 1937) is of thin-bedded shell limestone and calcareous dark shale, contrasting with the heavy-ledged upper beds of the Kirkfield. Locally these calcarenites extend into the basal Shoreham. The upper few feet of the Shoreham, distinct in the abundance of dense limestone beds, calcilutites, has been separated as the Rathbun member.[1] The formation is completely exposed on Rathbun brook and on Shedd brook (figure 31), the pre-Rathbun part having thicknesses of 41 and 29 feet, respectively; and of 24 feet on Buttermilk creek, 28, 26 and 17 feet on City brook, Stony creek and the stream north of County Home. There are about 60 feet of Shoreham on Sugar river northeast of Boonville, exposed in bluffs above the principal falls above the railroad. The Shoreham persists southeastward, being 17 feet at Canajoharie, lying on lower Ordovician. A re-entrant at 36 feet in the Rathbun Brook section may have a volcanic ash bed (metabentonite).

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[1] The Rathbun member, originally included in the Denmark formation (Kay, 1943), has been found by Chenoweth (1952) to be but a local phase of the Shoreham.

The Shoreham is characterized by the trilobite *Cryptolithus tess latus* Green, which though not always abundant, can normally be foun throughout the formation; the species has not been seen in highe units and the genus is rare in the upper, Rathbun member of the formation. *Prasopora orientalis* Ulrich is a more abundant and obvious fossil, a large, hat-shaped bryozoan which continues to be abundant in the succeeding Denmark; other similar species are present in the underlying Hull. The following forms have been identified in collections from pre-Rathbun beds along West Canada creek from Gravesville to Stony creek:

Pachydictya acuta (Hall)	f	Trematis terminalis (Emmons)	c
Prasopora orientalis Ulrich	a	Bucania punctifrons (Emmons)	u
Dalmanella rogata (Sardeson)	a	Holopea symmetrica Hall	u
Platystrophia amoena McEwan	c	Lophospira bicincta Hall	u
Pseudolingula rectilateralis (Emmons)	u	Phragmolites sp.	r
Rafinesquina trentonensis (Salmon)	a	Calliops callicephalus (Hall)	c
Rafinesquina sp. cf. R. prestonensis Salmon	u	Calymene senaria Conrad	c
Sowerbyella punctistriata (Mather)	a	Ceraurus dentatus Raymond and Barton	c
Strophomena conradi (Hall and Clarke)	u	Cryptolithus tesselatus Green	c
		Cryptolithus quadrilineus Whittington	r

The Shoreham is considered a formation within the quadrangle. It is the youngest Trenton unit that persists as limestone throughout the State, the succeeding Denmark beds being represented by shale to the east of the Adirondacks and westward to Canajoharie. The two formations have been considered members of the Sherman Fall formation in northwestern New York and Ontario, where their lithologic differentiation had not been accomplished, but recent studies by Chenoweth (1952) reveal that the contact is readily distinguished and mapped.

Rathbun member. The Rathbun member (Kay, 1943) has its type locality along Rathbun brook, one and one-half miles northwest of Newport. The basal ledge is an eight-inch calcarenite and is succeeded by six feet of brachiopod coquinal limestone, calcilutite and intercalated calcareous shale. Overlying is the cobbly, impure, fine-textured *Trocholites* subzone in the base of the Poland member of the Denmark formation, in which specimens of cephalopods and the graptolite *Diplograptus amplexicaulis* (Hall) are abundant locally. The member is fully exposed along the stream two and two-tenths miles northeast of Norway, in the Little Falls quadrangle, on Rathbun brook, City brook and Stony creek and that creek north of the road north of County Home, the thickness ranging from five to nine feet, being least at Stony creek. A somewhat greater thickness, with base unexposed, is shown on Gravesville Mill creek just above the railroad bridge.

The Rathbun is distinguished from the Shoreham by the presence of a considerable proportion of calcilutite, normally about a third of the total thickness (figure 30). Commonly, the base is a ledge as much as a foot thick of calcite sandstone or calcarenite and there are higher interbedded coquinas which are absent in the succeeding Poland member.

The fauna of the Rathbun along West Canada creek includes the following species (Craig, 1941):

Dalmanella rogata (Sardeson)	a
Rafinesquina trentonensis Salmon	f
Sowerbyella sp. cf. S. punctistriata (Mather)	c
Trematis terminalis (Emmons)	u
Pachydictya acuta Hall	c
Diplograptus amplexicaulis (Hall)	u
Ecculiomphalus sp. cf. E. trentonensis (Conrad)	u
Metaconularia trentonensis (Hall)	u
Cryptolithus quadrilineus Whittington	r
Ceraurus dentatus Raymond and Barton	u
Calymene senaria Conrad	u

The genus *Cryptolithus,* relatively common in the Shoreham, is rare in the Rathbun, the few specimens from Stony creek being of *C. quadrilineus;* both this species and *C. tesselatus* have been collected from the upper Shoreham along Black river but neither from the Poland though the latter species is frequent in late Denmark equivalent shales along Lake Champlain. *Diplograptus amplexicaulis,* uncommon in the Rathbun, becomes one of the most prevalent forms in the succeeding Poland.

Denmark limestone. The Denmark (Kay, 1937) formation is separable into two members recognized only in the Utica quadrangle and contiguous areas. The lower, Poland member, about 50 feet thick, is typically in the northwest of heavy ledges of black, fine-textured, tough, fossiliferous limestone with intercalated dark fossiliferous shale; southeastward, the heavy ledges of dense, brittle, chalky-weathering lime mudstone or calcilutite with intercalated shaly dark argillaceous beds progressively increase in quantity. The member contains several volcanic ash (metabentonite) beds that are useful in establishing its continuity. The upper member, the Russia, of similar thickness, is in the type section composed of 70 feet of black, bituminous, impure limestones and intercalated shales, both quite fossiliferous, with a few intercalated dense, barren beds, overlain by interbedded lime mudstones and dark platy shales. Southeast of Newport rocks of the facies of the typical Russia are present in decreasing thickness in the strata overlying the Poland and are interbedded with and overlain by increasing amounts of barren limestones with shale interbeds, the Dolgeville "facies"; they are overlain by black shales, a tongue of the uppermost Canajoharie formation, that may also be equivalent to a part of the

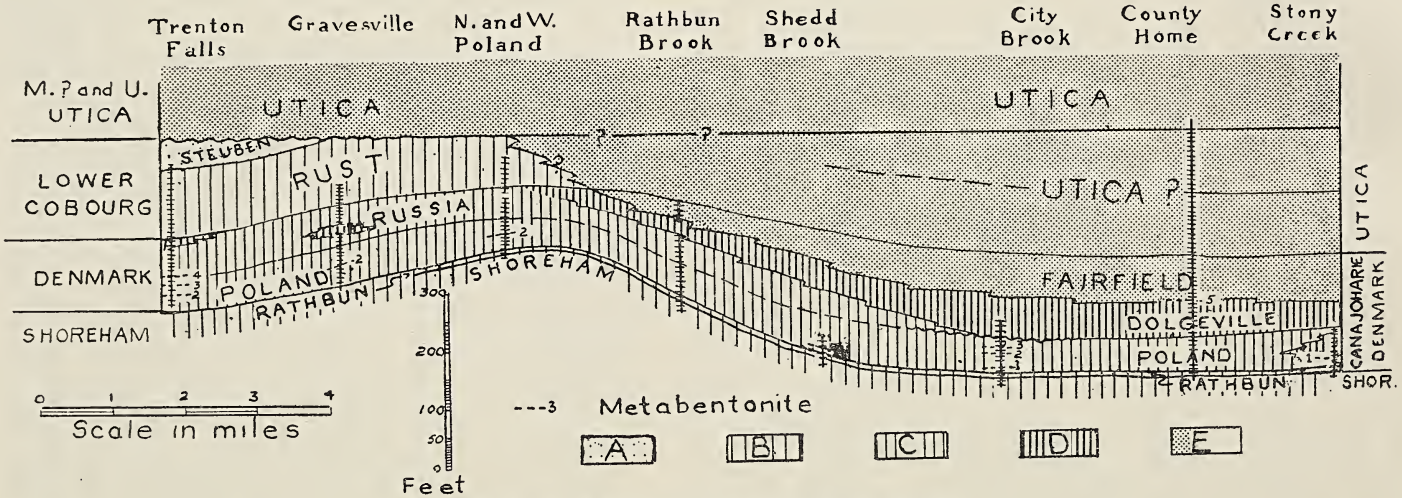

Figure 32 Interrelations of Trenton lithologies

A coarse-textured calcite sandstone (calcarenite)
B shell limestone (coquina), fossiliferous shale and dense, fine-textured limestone (calcilutite)
C dark, dense fossiliferous limestone and calcareous shale
D sparsely fossiliferous argillaceous calcilutite and laminated mudstone (shale)
E black, finely-laminated, graptolite-bearing shale

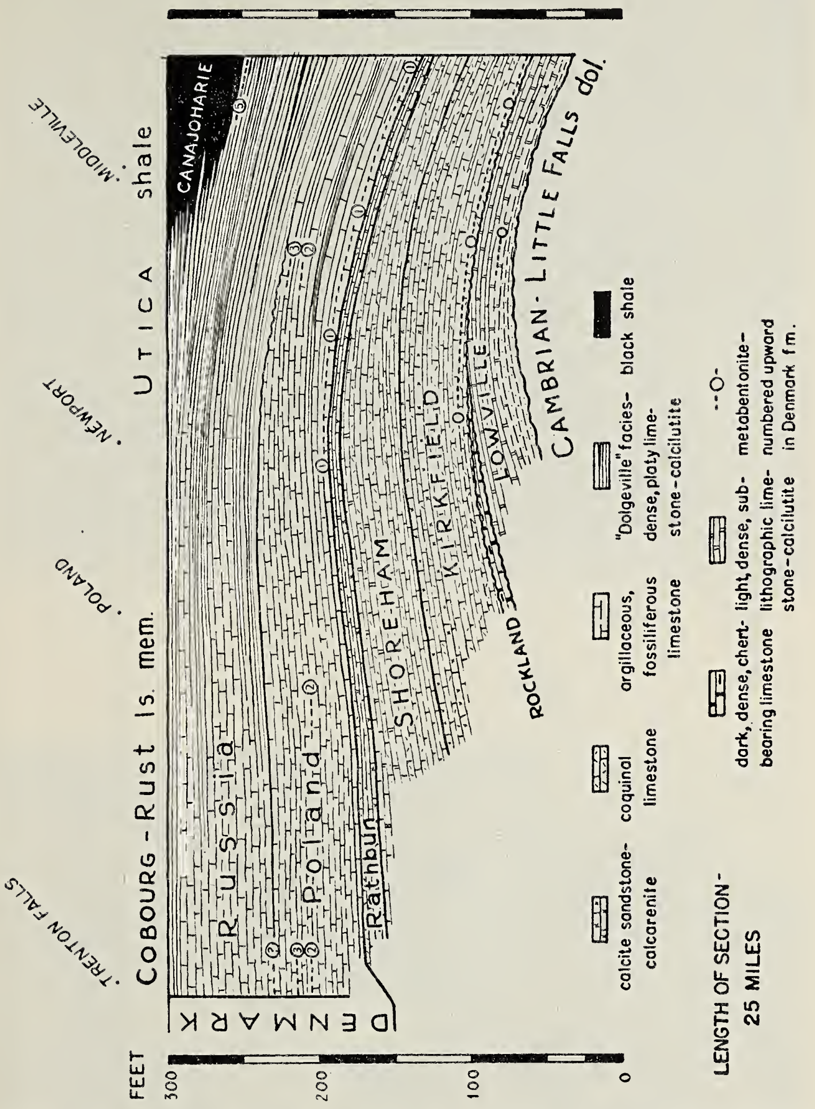
TRENTON FALLS
POLAND
NEWPORT
MIDDLEVILLE
COBOURG - Rust ls. mem.
UTICA shale
CANAJOHARIE
Russia
Poland
Rathbun
SHOREHAM
KIRKFIELD
LOWVILLE
ROCKLAND
CAMBRIAN - LITTLE FALLS dol.
DENMARK
FEET
300
200
100
0
calcite sandstone-calcarenite
coquinal limestone
argillaceous, fossiliferous limestone
"Dolgeville" facies- dense, platy limestone-calcilutite
black shale
dark, dense, chert-bearing limestone
light, dense, sub-lithographic limestone-calcilutite
--O- metabentonite-numbered upward in Denmark fm.
LENGTH OF SECTION - 25 MILES

Figure 33 Restored section of the Lowville, Rockland, Kirkfield and Denmark formations along West Canada creek

type Russia. At Canajoharie and eastward along the Mohawk, the Canajoharie black shales are equivalent to the whole of the Denmark and lie directly on the Shoreham limestone.

The lateral and vertical relations of the facies of the Denmark and adjoining formations are represented in the section (figures 32 and 33) and table:

TABLE II

Trenton Lithologies

Black River valley	Trenton Falls and Gravesville	Poland	Middleville	East Canada creek	Canajoharie	Amsterdam
LOWER COBOURG A/B	Steuben A	? absent ?	part of UTICA E	part of UTICA E	part of UTICA E	part of UTICA E
	Rust B	B-C ? -D ?-				
DENMARK B	Russia CD	Russia CD	E	E	CANAJO-HARIE E	CANAJO-HARIE E
			Dolgeville D	Dolgeville D		
	Poland C	Poland C	Poland DC			
SHOREHAM B	Rathbun B	Rathbun B	Rathbun B	? absent ?	? absent ?	?
	SHOREHAM B	SHOREHAM B	SHOREHAM B	SHOREHAM AB	SHOREHAM AB	SHOREHAM B

A—coarse-textured calcite sandstone, calcarenite
B—shell limestone (coquina), fossiliferous shale and dense, fine-textured limestone (calcilutite)
C—dark, dense fossiliferous limestone and calcareous shale
D—sparsely fossiliferous argillaceous calcilutite and laminated shale
E—black, finely-laminated, graptolitic shale

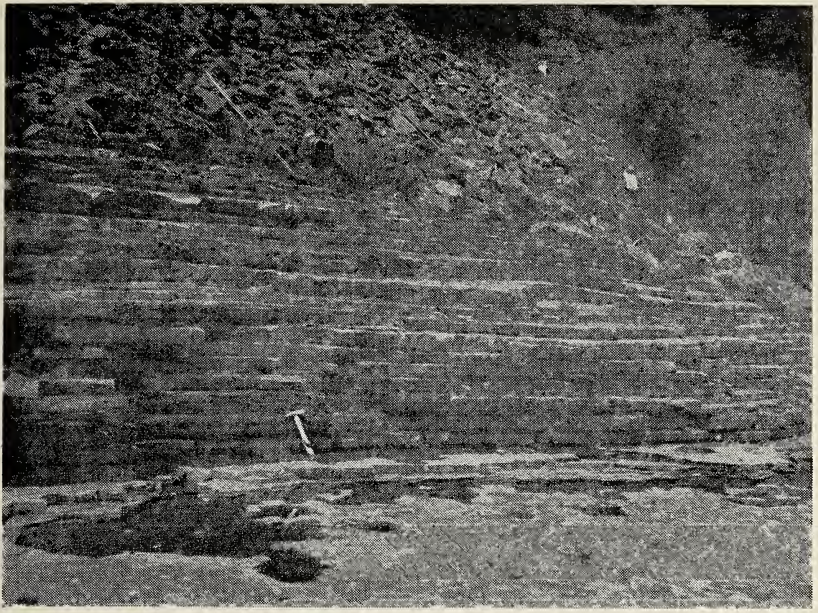

Figure 34 Trenton Falls; Russia limestone of Dolgeville facies; top of lower High falls

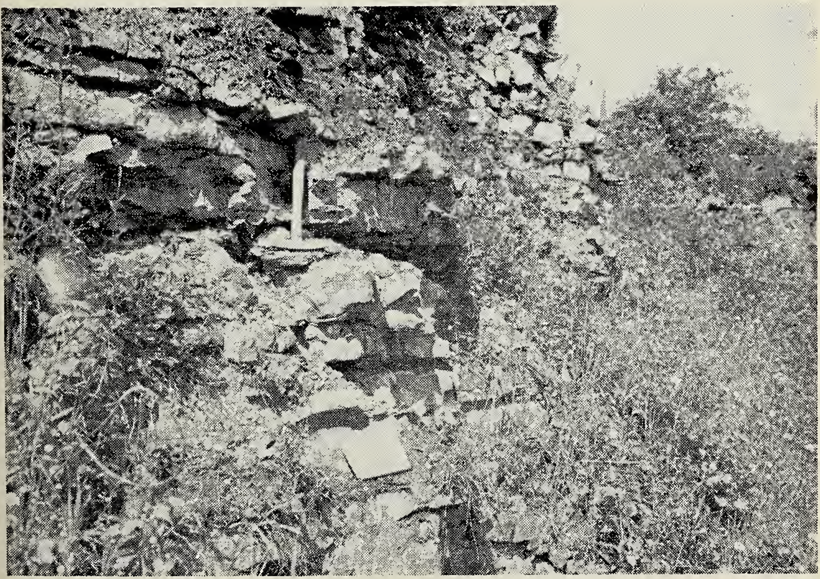

Figure 35 Basal Poland limestone in quarry north of Shedd brook; Trocholites subzone to book; metabentonite at hammer

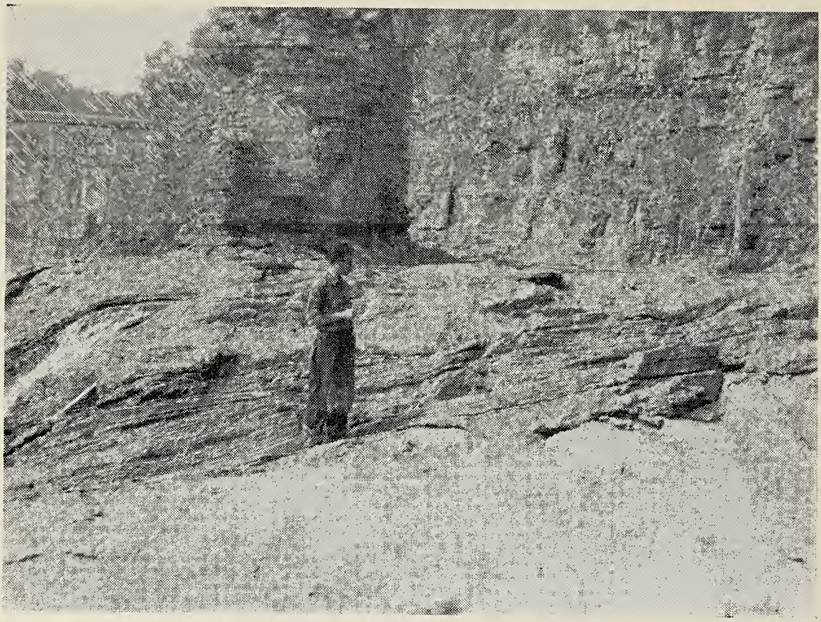

Figure 36 Steuben limestone above projection of dam, over Rust limestone with contorted beds; spillway above Prospect bridge, Trenton Falls

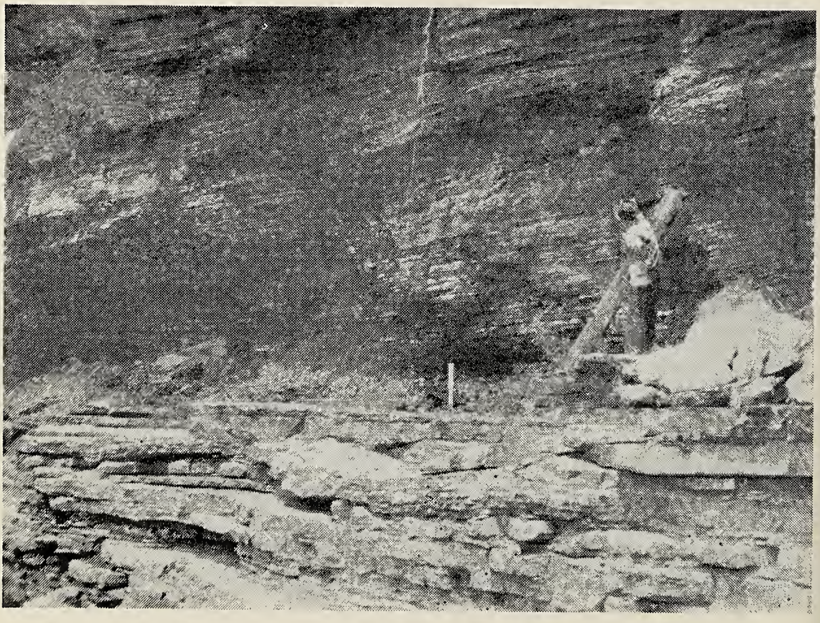

Figure 37 Rust limestone overlying Russia one foot below hammer; limestone breccia above man's head; base of upper High falls, Trenton Falls

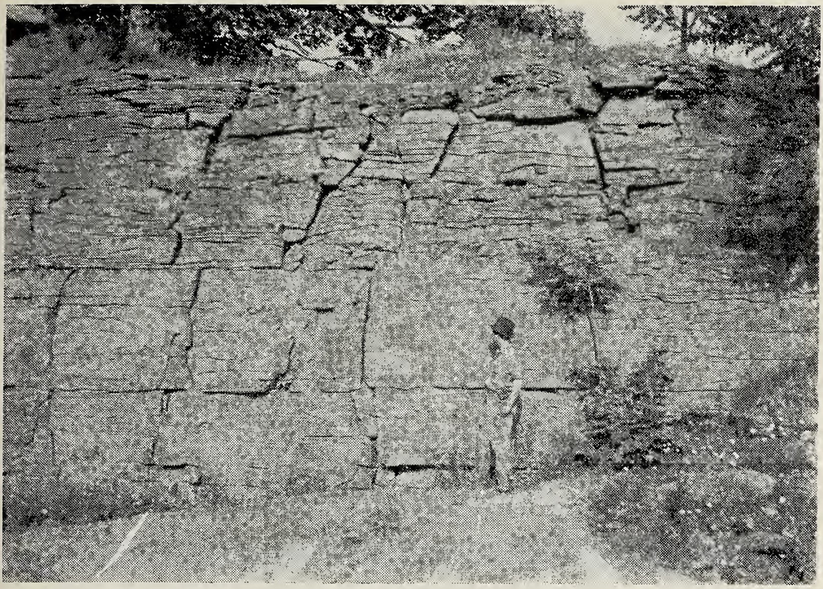

Figure 38 Steuben limestone; quarry west of Holland Patent—Trenton road

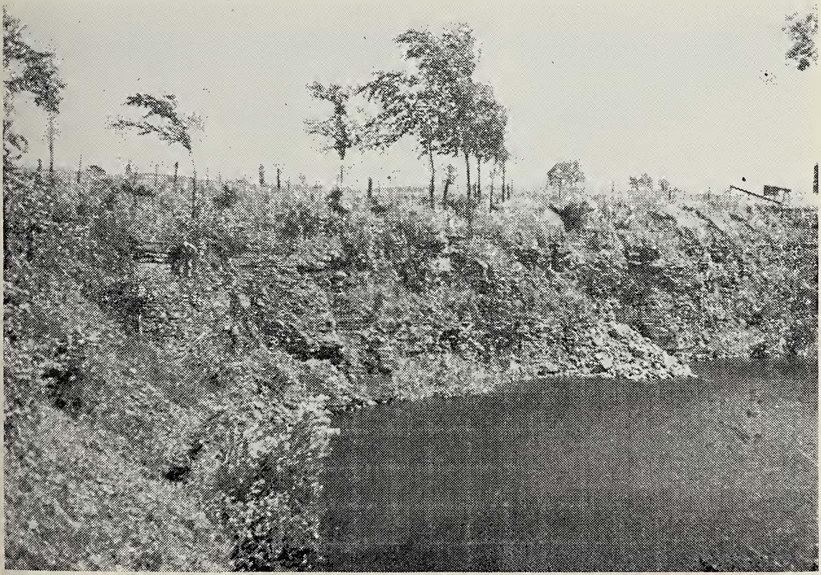

Figure 39 Rust limestone; quarry 1.5 miles west of Poland

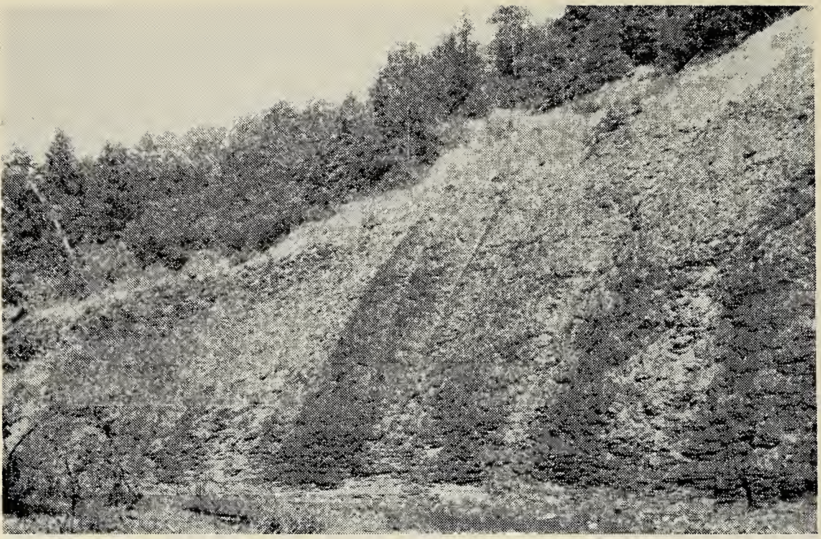

Figure 40 Utica black shale below bridge over Reels creek northwest of Smith hill

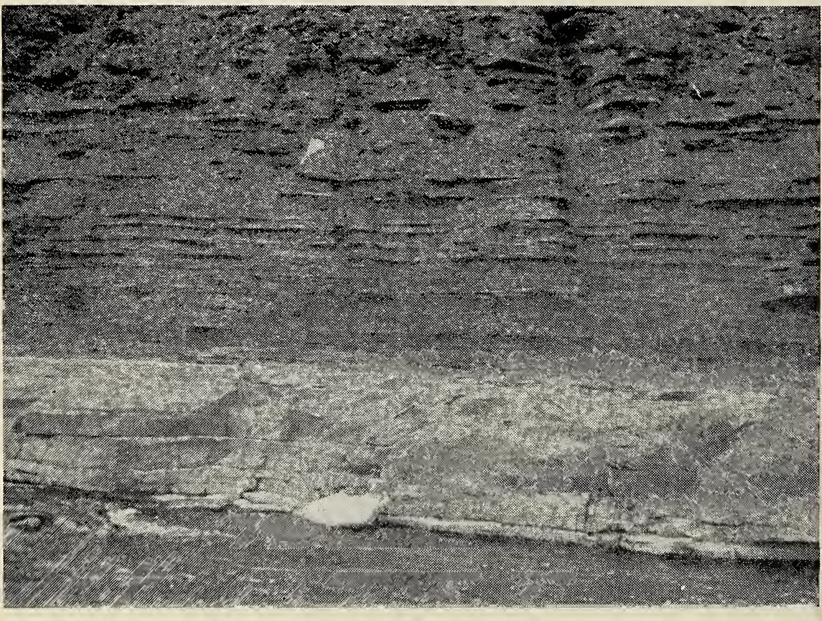

Figure 41 Steuben limestone overlain by Utica shale; Big brook near Frenchville

Poland member. The Poland (Kay, 1943) limestone member of the Denmark formation is named from the village of Poland, the type section being in the Trenton Falls gorge to the west. The Rathbun coquinas and calcilutites are abruptly succeeded by about two feet of black, wavy-bedded, impure, bituminous limestone in which the cephalopods *Geisonoceras tenuistriatum* (Hall), *Endoceras proteiforme* Hall and *Trocholites ammonius* Conrad are abundant or frequent. These few feet of resistant ledges are falls and terrace-forming and will be referred to as the Trocholites subzone. That they are not only faunally and lithologically constant but also synchronous is shown by the persistence of a thin metabentonite a foot or two above the subzone. On Rathbun brook and northwestward, the overlying beds are of heavy-ledged, dense, tough, brittle limestone containing in addition to cephalopods, *Calymene senaria* (Conrad), *Sinuites cancellatus* (Hall) and *Isotelus gigas* (Dekay) in abundance in a matrix having joints of crinoids or cystids. Inasmuch as it is these beds that form the lowest exposures at Trenton Falls, it is probable that the base of the member lies within ten feet below.

Though the base of the Poland member is not exposed at Trenton Falls, that section is selected as the type of the unit which is defined as extending to the prominent re-entrant at the base of lower High falls and above Sherman Fall, through an exposed thickness of about 50 feet. The member is incompletely exposed in the characteristic facies in the streams one mile north of, and one and four-tenths miles north-northwest of Poland (which latter flows westward rather than southeastward as shown on the topographic map); on Gravesville Mill creek there is complete exposure to the second fork above the village.

The top of the member is somewhat arbitrarily defined on these streams, but for reasons that will be presented, is at approximately the same horizon as the marked lithologic change in sections southeast of Middleville. On City brook, the best exposed southeastern section, beds of the lithology of the typical Poland extend for 50 feet, though intercalations of relatively barren, heavy-ledged, knobby-surfaced calcilutite are more prevalent. They are succeeded on a pitted and somewhat mineralized surface by interbedded fine-textured limestones and laminated argillites, barren of fossils, and exposed for about 25 feet; these are of Dolgeville facies and probably equivalent to the lower Russia at Trenton Falls. Along Maltentanner creek, east of Middleville, the Trocholites subzone is in the uppermost exposures above the glen by the roadside. On Stony creek, 42 feet of the Poland member has fossiliferous limestones of the typical facies limited to the Trocholites subzone and the upper five feet of exposure, the intervening rather barren beds having a few specimens of entire carapaces of *Calymene senaria.*

Metabentonites, altered volcanic ash beds, permit correlation of the southeastern facies with that at Trenton Falls. These are thin beds of yellow-weathering grayish clay that, when wet, can be formed into a small ball. None in the Poland is as thick or as evident as that in the lower part of the Hull, and frequently they are represented only by deep re-entrants. They represent the attenuated northern extensions of beds that in Pennsylvania and southward reach thicknesses of a foot or more.

The lowest of these metabentonites in the Poland lies one to three feet from the top of the Trocholites subzone, two to five feet in the Poland member. It is shown on Shedd (figure 35) and City brooks, and particularly well at Stony creek, where it directly overlies an extensive pavement on a limestone with the top ten inches above the Trocholites beds. A second clay is the lower shown in Sherman Fall (figure 16) and at the powerhouse at Trenton Falls, some 26 feet from the base of exposure and about 35 feet in the member. It is thought to be best shown 28 feet above the highest Rathbun exposure on the stream a mile north of Poland and to correspond to prominent re-entrants at 30 feet on Gravesville Mill creek and 31 feet at City brook. The third clay is nine feet higher at Trenton Falls, thus 44 feet in the estimated section of the member, and is shown at 40 feet on City brook. The re-entrant 15 feet higher at the base of High falls, Trenton Falls, which may represent a metabentonite, has been chosen the top of the member and would seem at about the top of the Poland classified beds in their changed facies from City brook southeastward. If these correlations be correct, they show that there is little convergence or variation in thickness in the Poland member in the area and that the rocks change from the typical Poland facies toward that of the Dolgeville by intertonguing of the two lithologies. Beds of Dolgeville facies directly overlie the Shoreham in the southeastern Little Falls map sheet, though beds like those of the typical Poland are found almost to Manheim Center. The Trocholites subzone has been recognized three miles east of Norway, northwest of Diamond hill. It has been traced northwestward through Watertown to Lake Ontario near Sacketts Harbor (Chenoweth, 1952).

The Poland member is the zone of *Diplograptus amplexicaulis* (Hall) and the graptolite has been collected in abundance to the top of the beds; it also characterizes the lower, or Minaville, member of the Canajoharie black shale in the lower Mohawk valley. A few specimens have been seen in the underlying Rathbun but none in the succeeding Russia, though search has not been exhaustive. The fauna of the Poland comprises the best known Trenton species for they have been collected at Trenton falls for more than a century. The following have been identified from material from along West Canada creek within the quadrangle, from the Trocholites subzone and immediately succeeding beds:

Diplograptus amplexicaulis (Hall)	a
Prasopora orientalis Ulrich	f
Dalmanella sp. cf. D. rogata (Sardeson)	a
Pseudolingula sp. cf. P. riciniformis (Hall)	u
Rafinesquina sp. cf. R. trentonensis Salmon	f
Schizocrania filosa Hall	r
Sowerbyella sp.	c
Trematis terminalis (Emmons)	u
Archinacella patelliformis (Hall)	r
Sinuites cancellatus (Hall)	a
Conularia trentonensis Hall	u
Geisonoceras lineolatum (Hall)	c
Geisonoceras tenuitextum (Hall)	a
Geisonoceras tenuistriatum (Hall)	a
Oncoceras sp. cf. O. constrictum (Hall)	u
Endoceras proteiforme Hall	c
Trocholites ammonius Conrad	c
Calymene senaria Conrad	a
Isotelus gigas (Dekay)	a

Russia member. The upper member of the Denmark formation, the Russia (Kay, 1943), is typically developed in the Trenton Falls gorge along the west line of Russia township. It extends from the Poland through 70 feet to a disconformity two feet below a ferruginous bed replete with specimens of *Dalmanella* and *Sowerbyella* in the lower part of upper High falls. In its type section, the Russia has 50 feet of black, bituminous, impure limestone with irregular shale interbeds, both abundantly fossiliferous and a number of barren, fine and medium-textured limestones, most abundant in the upper part of lower High falls; then eight feet of shales and limestones transitional to the uppermost 12 feet of rather nonfossiliferous, jointed, calcareous mudstone and brown-weathering laminated argillite, conspicuous in the terrace between the two High falls (figure 34).

In the northwest, the incompletely exposed rocks on Gravesville Mill creek between the Poland and Cobourg are considerably of the facies of the uppermost part of the type section and seem only about 40 feet thick; they are best exposed on the west fork seven-tenths of a mile northeast of the railroad bridge and in the bluffs along the east fork. On the streams north of Poland, the thickness is of the same order; in the ravine one and one-half miles north-northwest of the village, *Rafinesquina deltoidea*-bearing coquinas of the lower Cobourg overlie muddy limestones and shales that are presumably Russia, the boundary not clearly defined.

South of Poland is a quite different section. On Rathbun creek, two miles south, 190 feet of beds are exposed interruptedly above the Trocholites subzone at the base of the Poland member. For 100 feet the rocks are black, orthoceracone-bearing limestone with calcilutite and shaly argillite interbeds like those in the typical Poland and Russia except that calcilutites are more abundant; the upper fifty feet or so of this interval are probably Russia. Beyond 30 feet of concealed beds are 60 feet of exposure; the lowest ten feet are interbedded barren limestone and dark shale; the overlying beds are predominantly black shale (figure 12) with a few thick limestones in the lower 15 feet and thinner ones above. The black shale contains *Dicranograptus nicholsoni* Hopkinson, *Climacograptus typicalis* (Hall) and other fossils; it is uncertain whether this is Canajoharie or Utica but it is probably the latter; the faunule is not demonstrative (Ruedemann). Inasmuch as the Cobourg is exposed about one mile north, it is probable that the unexposed interval and base of the succeeding section is the southeastern tongue of that formation.

The distinction between the Poland and Russia becomes more obvious southeastward, particularly on City brook. The pitted and mineralized upper surface of the fossiliferous Poland is overlain by interbedded barren limestones and laminated shales; a few of the former exhibit mud-flow phenomena and giant ripples. Along the stream flowing into West Canada creek, three miles south of County Home, about 65 feet of fine-textured limestone with thicker black shale intercalations are directly overlain by black shale (figure 13) having an upper Canajoharie fauna; toward the top, the shales become thinner and the limestones were folded and warped before their induration and the deposition of the shale which lacks the structures. At the contact is a 15-inch black laminated, graptolite-bearing mudstone, succeeded by a 5-inch gray clay that is metabentonitic as demonstrated by its X-ray diffraction pattern and that by a monotonous succession of black shale. Thus the contact of the Russia with the Poland on City brook is disconformable, the member is wholly in the Dolgeville facies and at County Home is conformably overlain by upper Canajoharie black shale that may also be equivalent to the typical upper Russia. The problems of the correlation of the southeastern facies of the Russia will be considered later after discussion of the Cobourg limestone. The members are not recognized in the Black River valley.

The fauna of the Russia has not been critically studied, but *Prasopora orientalis* Ulrich, species of *Dalmanella, Rafinesquina* and *Sowerbyella, Trematis terminalis* (Emmons), *Endoceras proteiforme* Hall, orthoceracones probably of the genus *Geisonoceras, Calymene senaria* Conrad and *Isotelus gigas* (Dekay) are abundant in the type section. Coquinal limestones are practically absent, in contrast to the Cobourg and *Rafinesquina deltoidea* (Conrad) of the latter has not been seen, nor *Diplograptus amplexicaulis* (Hall) of the Poland. The member is equivalent to the upper part of the Dolgeville beds east of the quadrangle, and possibly also to the uppermost Canajoharie shale.

Dolgeville facies. The name Dolgeville (Cushing in Miller, 1909) was proposed for the interbedded rather barren limestones and dark shales that lie between the fossiliferous Trenton limestones and the black shales near Dolgeville, in the eastern Little Falls quadrangle. In the type locality these overlie the Shoreham limestone and underlie the uppermost Canajoharie (Fort Plain zone of the Fairfield member). Rocks of this lithology grade into the Poland member of the Denmark formation along lower West Canada creek, and in the southeastern exposures at Stony creek there is limited representation of the typical Poland lithology; thus it is certain that the lower part of the type Dolgeville corresponds to the Poland limestone. The rocks having the stratigraphic position of the Russia member in the vicinity of Middleville are wholly of Dolgeville facies, and are succeeded by black shales bearing the same fauna as those overlying the type Dolgeville. Moreover, there are interbeds of Dolgeville facies in the Russia member on Gravesville Mill creek and the uppermost part of the type Russia is of this sort. It is therefore probable that the higher type Dolgeville is equivalent to most of the Russia. That the succeeding beds of the Canajoharie shale are equivalent to the uppermost Russia can not be demonstrated as convincingly. Thus the typical Dolgeville is equivalent to nearly the whole of the Denmark; the uppermost Russia probably passes by gradation into the black shales of uppermost Canajoharie equivalence that overlie the type Dolgeville; the Rathbun member is probably absent by disconformity.

Canajoharie shale. The Canajoharie (Ruedemann, 1912) black shale directly overlies the Shoreham limestone with disconformity at the type section. Moreover, the basal (Morphy, Ruedemann and Chadwick, 1935) zone is absent and the zone of *Diplograptus amplexicaulis* (Sprakers, Ruedemann and Chadwick, 1935) overlies the disconformity. Inasmuch as the Poland is also characterized by *Diplograptus amplexicaulis,* and grades southeastward into beds of Dolgeville facies, the correlation of the Poland with the Sprakers zone of the Canajoharie is implied, with passage from the typical Poland through beds of Dolgeville facies into the black shale. Of the three succeeding zones of the Canajoharie, forming the Fairfield (Vanuxem, 1842) member (Kay, 1937), only the uppermost zone (Fort Plain, Ruedemann and Chadwick, 1935) overlies the rocks of Dolgeville facies in the Little Falls quadrangle and the southeastern Utica quadrangle. This zone is of silty shale at Canajoharie but of black shale along West Canada creek.

The contact of the Canajoharie shale (upper Fort Plain, zone of the upper Fairfield member) with the Dolgeville is exposed in the stream south of County Home, a five-inch metabentonite lying just above. Inasmuch as the base of the succeeding Utica shale has not been determined, the thickness of black shale of Canajoharie age is not known but is at least 50 feet. This has been mapped with the Utica and is lithologically identical to that formation. Faunules have also been collected from near the base on the stream north of County Home and from Rathbun brook; the former are definitely from the Canajoharie, and the latter doubtfully so.

* Localities	1	2	3
Climacograptus typicalis spinifer Ruedemann	x	.	.
Climacograptus sp.	.	x	x
Dicranograptus nicholsoni Hopkinson	x	.	x
Glossograptus quadrimucronatus cornutus Ruedemann	x	.	.
Leptobolus insignis Hall	x	x	x
Lingula sp. cf. L. riciniformis Hall	.	x	.
Skenidioides (?) sp.	.	x	.
Conularia gracile Hall	.	x	.
Metaconularia sp. aff. M. papillata (Hall)	.	x	.
Holopea sp.	.	x	.
Cyclora sp.	x	.	.
Arabellites sp.	.	x	.
Triarthrus eatoni Hall	x	x	x
Eurypterid fragments	.	x	.
Aparchites sp.	x	x	.
Bollia sp.	x	.	.
Schmidtella sp.	x	x	.
Ulrichia (?) bivertex (Ulrich)	x	x	.

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*Localities: 1, lowest 50 feet of black shale, second stream south of County Home; 2 and 3, Rathbun Brook, lowest and highest exposed black shales, age uncertain (*fide* Ruedemann), probably Utica.

Cobourg limestone. The Cobourg (Raymond, 1916) formation is separable into two members in northwestern New York and Ontario, only the Lower Cobourg (Hallowell) being represented in the Utica region. The formation is excellently shown along the Trenton Falls gorge from the lower part of upper High falls to the top of the bluffs. The most of the exposed thickness of about 140 feet is composed of thin-bedded limestone and shale of the Rust member but the upper 26 feet of exposure is of coarse-textured calcite sandstone or calcarenite of the Steuben member, which totals about 60 feet and is directly overlain disconformably by Utica black shale. The Steuben is responsible for a cliff-faced terrace or cuesta that continues from Russia township to Lake Ontario and westward into Prince Edward county, Ontario.

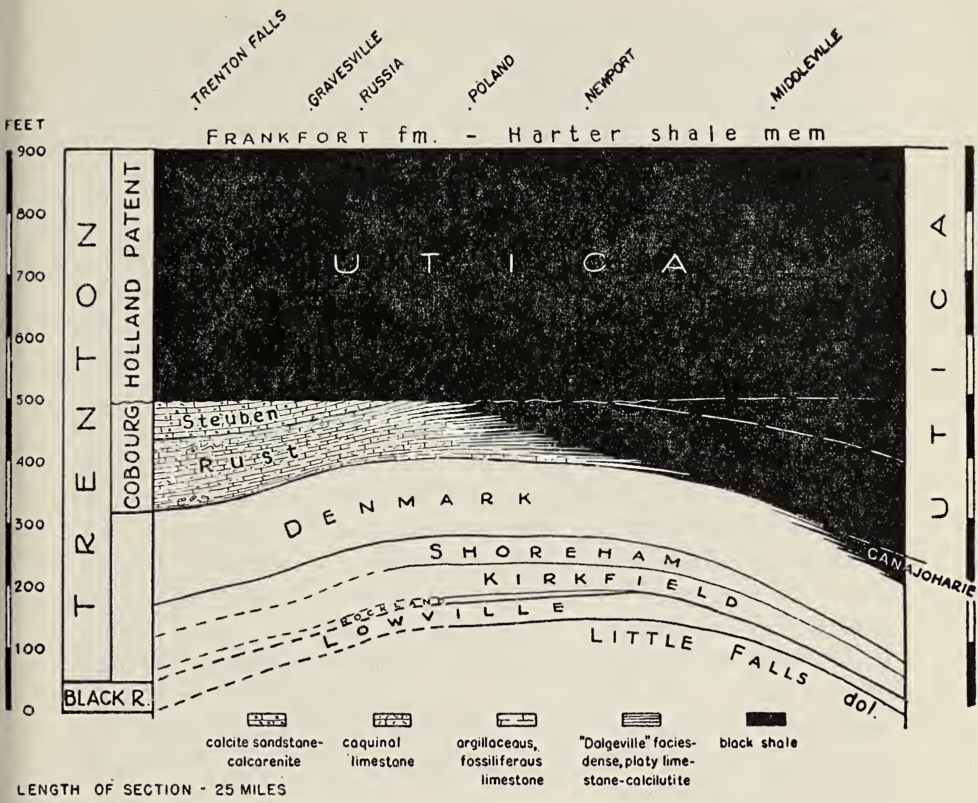


Figure 42 Restored section representing the interpretation of the Cobourg and Utica formations

Rust member. The Rust (Kay, 1943) limestone extends from the lower part of upper High falls to the lithologic change a few feet above the high dam through about 115 feet in the Trenton Falls section; the name is from Rust farm, a mile to the east, made famous by the collecting of William Rust, more than a half century ago. The rocks in the Rust quarry to the south are probably, though not certainly, in the basal part of the Rust member.

The basal beds at Trenton Falls are lensing limestone and shale, channeling the top of the Russia member of the Denmark formation. Ten feet higher (figure 37) is the base of a three-foot zone of limestone breccia having disordered slabs and blocks of *Rafinesquina deltoidea*-bearing limestone like that in adjoining undisturbed stratums. Succeeding are limestones, some rather heavy-ledged and medium-textured, with intercalated shales, extending to the platform beneath the railroad bridge, about 60 feet from the base of the member. Ten feet higher (70 feet) are eight feet of interbedded white-weathering calcilutite and shale (to 78 feet). A continuous section of 24 feet of *Rafinesquina*-coquinas and shales (to 102 feet) succeeds south of the spillway but along that section the upper 15 feet are folded and brecciated (figures 17 and 36) ("contorted beds") by slumping that immediately followed their deposition (Hahn, 1913); similar but undisturbed interbedded coquinas and shales continue for 13 feet to the contact with the Steuben calcarenites above the level of the masonry dam (115 feet). Thus, in the type section, the Rust has shaly limestones including a three-foot intraformational conglomerate ten feet from the base and a 15-foot contorted zone 13 feet from the top; intervening is an eight-foot zone of calcilutite and barren shale.

Within the quadrangle, the best continuous exposure through the base of the member is on the stream one and one-half miles north-northwest of Poland, *Rafinesquina deltoidea* being present through the upper 62 feet of the section, with a contorted zone near the base. The underlying argillaceous limestone is thought to be Denmark. Crystalline beds, containing *Ceraurus pleurexanthemus* and *Platystrophia amoena* that are present in comparable position along upper Gravesville Mill creek and one and one-half miles north-northeast of Poland and are similar to the ledges in the Rust quarry, have not been recognized in the intermediate section. This latter zone has not been located in the type section either, but examination of the lower Rust in the vertical cliffs is difficult.

Typical Rust limestone has been quarried on the hill one and one-half miles west of Poland (figure 39); the base is about 105 feet above the base of the Poland, and considering the southward dip, the strata between the base of the Poland and the base of the exposed Rust are about 130 feet thick with about 40 feet of Rust exposed. These exposures on the hills north and south of Poland are the farthest southeast that have been discovered of the Rust and of the Cobourg. Within two and one-half miles southeastward, at Rathbun brook, exposure is incomplete. The beds concealed in the interval of thirty feet may be Cobourg; there is gradation upward into continuous black shale bearing *Dicranograptus*.

Rafinesquina deltoidea (Conrad) is common in the Rust and not known below, thus being an excellent guide fossil; present also in the succeeding Steuben, that member is readily distinguished by its lithology. The fauna of the Rust member has not been critically studied except in the Rust quarry which is probably in the lowest part of the member, but possibly in the uppermost Denmark. The list of Delo (1934) is large and includes the following:

Prasopora orientalis Ulrich
Prasopora conoidea Ulrich
Mitoclema mundulum Ulrich
Rhinidictya exigua Ulrich
Eridotrypa exigua Ulrich
Dalmanella rogata (Sardeson)
Sowerbyella sericea (Sowerby)
Zygospira recurvirostris (Hall)
Caymene senaria Conrad
Ceraurus pleurexanthemus Green
Isotelus gigas (Dekay)
Acidaspis trentonensis Walcott

The problem of the southeastward disappearance of the Cobourg limestone will be discussed separately.

Steuben member. The Steuben limestone (Kay, 1943) is named from Steuben creek, and is typically exposed in small quarries and along streams south of the road south of the stream for a mile from its mouth. The member comprises the 26 feet of coarse-textured, cross-laminated calcite sandstone or calcarenite exposed at the top of the bluff by the high dam in the Trenton Falls gorge (figure 36) ; the thickness has been estimated as 30 feet (Miller, 1909) but seems more nearly 60 feet in exposures west of the Trenton-Holland Patent road (figure 38) just northwest of the Utica area. The member is exposed near its contact with the Utica shale south of the type locality and along Nine Mile creek three miles below South Trenton. The Steuben is found only in the northwest part of the area, though its horizon is exposed in the east; the cause of its disappearance will be discussed in the following paragraphs.

Fossils are not common in the most of the member, but specimens of *Rafinesquina deltoidea* (Conrad) and *Platystrophia longicardinalis* McEwan have been found. The member corresponds to the upper, cliff-capping part of the lower Cobourg (Hallowell) limestone of northwestern New York which is not as preponderantly coarse-textured and is more fossiliferous.

Disappearance of the Cobourg limestone. The manner of southeastward disappearance of the Cobourg limestone is not known definitely. The upper Steuben member, 60 feet thick, west of Trenton Falls, is exposed southeastward to south of the mouth of Steuben creek, five miles west-northwest of Poland. The Rust member is exposed in ravines one and five-tenths miles a little east of north, a similar distance west of north and one mile south of Poland and along the highway one and two-tenths miles west of the village. In each, exposure approaches or exceeds 50 feet, and the base is about 100 feet above the Trocholites subzone of the lower Denmark formation. In the locality west of north of Poland, the basal crystalline ledges of the Rust adjoin shaly Russia limestone and the highest exposures are of platy shaly limestone containing *Rafinesquina deltoidea.*

Rathbun brook is a little more than two miles south of Poland. The Denmark is exposed for about 100 feet above the Trocholites subzone with somewhat detrital limestone beneath an interval concealing about 30 feet of beds. Fifteen feet of succeeding dense limestone with black shale interbeds passes into 50 feet of predominantly black shale with *Dicranograptus nicholsoni* near the top. The graptolites from the shale are not diagnostic (Reudemann); there seems gradation down into the shaly limestone. If the Cobourg is present at this locality, it must lie in the concealed interval, be less than 50 feet thick and grade into black shale and its base would be about 100 feet above the Trocholites subzone. The alternatives are (*a*) that it disappears in the mile to the north and the Denmark thickens 50 feet, or (*b*) it succeeds the exposure, the base lying nearly 200 feet above the Trocholites subzone, an increase of 100 feet in a mile or so. The evidence seems to favor the view that the Cobourg lies in the concealed interval.

Black shale is exposed near the head of the north fork, and along the south fork of Shedd brook, a mile south, and three miles south-southeast, respectively; each is within about 200 feet of the Trocholites subzone, with interrupted exposure of black shale above, precluding the Cobourg's continuing at this level. And black shale exposure is continuous from within the Canajoharie to the top of the Utica at County House, farther southeast.

The Steuben limestone lies disconformably below the Holland Patent (upper Utica) shale, evidenced not only by abrupt change from calcarenite to laminated claystone, but by absence of younger Cobourg (Hillier) limestone that enters northwestward in the Black River valley. The 200 feet of Rust and Steuben limestones in the Trenton area is certainly absent in this facies near Middleville and considerably reduced if not absent about Newport. The interpretation that seems best to meet the known evidence is that (1) the Steuben disappears by unconformity west of Poland, (2) the Rust thins, becomes more shaly and argillaceous, probably grading into black shale in the Poland-Newport area, becoming lower Utica black shale southeastward. It must be noted that the post-Steuben unconformity has not been recognized south of Middleville in the continuously exposed black shale section nor is it known which divisions of the Utica are present. Thus the diagram (figure 42) includes much that is interpretation.

Utica shale. The Utica shale (Vanuxem, 1842) lies on the Cobourg limestone in the northwestern part of the area and on upper Canajoharie black shale, equivalent to the uppermost Denmark, in the southeast. The contact with the Cobourg is not exposed within the quadrangle; it is clearly shown along Big brook at Frenchville seven miles northwest of the area (figure 41). The contact is closely approached at several localities southwest of Steuben creek, and along Nine Mile creek two and one-half miles west of South Trenton. The contact of the similar Utica and Canajoharie shale has not been ascertained in the continuous section southeast of Harter hill and critical faunal study will be needed to find it. The upper boundary is gradational into the Harter shale member of the Frankfort formation and is transgressed in many sections around the Deerfield hills.

The Utica is composed of a monotonous series of finely laminated black shales, argillites, in which graptolites are frequent. There are a few heavy, brown-weathering ledges that are ferruginous and seem to be indurated shale. At a few localities these are lensing and comparable in character to septarian concretions; one concretion on Reels creek has a diameter of 12 feet with calcite filling the fractures. In the western part of the area, the thickness of the Utica has been computed as about 400 feet. A complete section through the beds is not exposed in the northwest but is in the east along the stream north of County Home, rising to the south of Harter hill. The contact of the underlying Canajoharie and Russia is well shown on the stream to the south; the thickness of the Utica is probably about 700 feet, there being 750 feet of black shale in the section. The longest continuous exposure is along Reels creek (figure 40), extending for seven miles from north of Deerfield to north of Smith hill, but as the gradient of the stream is comparable to the dip of the beds, the stratigraphic thickness is not more than 200 feet.

Ruedemann (1925) has found that the graptolites in the Utica of the northwestern part of the area and of the beds exposed along the Mohawk river, are wholly of upper Utica (Holland Patent) age. Study has not been made of those in the basal part of the formation along West Canada creek. The lower and middle Utica are known to be present on tributaries of the Mohawk above Canajoharie and their western limit has not been determined. Nearly 75 species of algae, sponges, graptolites, bryozoans, brachiopods, worms, gastropods, pteropods, pelecypods, cephalopods, trilobites, a cirriped, ostracods and eurypterids have been listed from the basal beds of the shale near Holland Patent and South Trenton in the northwest part of the quadrangle (Reudemann, 1925). Of these, the following are most common:

Mastigograptus simplex (Walcott)
Mastigograptus tenuiramosus (Walcott)
Pleurograptus linearis (Carruthers)
Leptograptus annectans (Walcott)
Dicranograptus nicholsoni Hopkinson
Climacograptus typicalis Hall
Lasiograptus eucharis (Hall)
Glossograptus sp. cf. G. quadrimucronatus (Hall)
Cyathodictya reticulata (Walcott)
Trocholites ammonius Conrad
Triarthrus eatoni Hall

These and other forms typical of the upper Utica have also been recorded (Ruedemann, 1925) from Starch Factory, Maynard and Reels creeks within the quadrangle.

The upper Utica shale has been correlated with the Collingwood and Gloucester shales, the two highest formations of the Trenton group in Ontario. The lower and middle Utica of the Mohawk valley is thought equivalent to the Cobourg, separated from it by an arch passing southwestward through the northeastern part of the area.

CINCINNATIAN SERIES

Frankfort Formation

The Frankfort formation (Vanuxem, 1840) comprises the shales and quartz sandstones lying above the Utica shale and beneath the Silurian Oneida conglomerate. All but the basal part of the formation is extensively exposed along Moyer creek, south of Frankfort, in the southeast corner of the quadrangle. The lowest beds are abundantly exposed in sections on the flanks of the Deerfield hills and the contact with the Oneida in several localities south of the Mohawk. The formation has at its base about 100 feet of greenish-gray shale, the Harter member, that is indistinctly separated from the Utica and has been mapped with that formation. The contact with the Hasenclever sandstone member is sharply defined, widely exposed and a most valuable horizon on which to map the structure of the region from the north flank of the Deerfield hills to the south of the Mohawk. This unit, having a thickness of the order of 40 feet, is followed by the Moyer member of interbedded sandstones and shales, about 400 feet thick.

Harter member. The Harter shale (new), named for the Harter hills along which it is extensively exposed, consists of greenish-gray, laminated claystone, grading rather imperceptibly into the black shale of the Utica formation below. The shale weathers and breaks into small, conchoidally fractured chips, in contrast to the more platy, larger fragments of the Utica; the chips form talus slopes along most of the deeper ravines where the beds are exposed. Typical exposures are those in the ravine south of Harter hill; the contact with the overlying Hasenclever sandstone member is better seen in the quarry one-tenth of a mile north of the road corner seven-tenths of a mile southwest of the top of Harter hill. In the latter section, there are thin, cross-laminated siltstones or fine quartz sandstones in the upper five feet of the member and elsewhere one to four-inch beds are present from ten to 15 feet from the top.

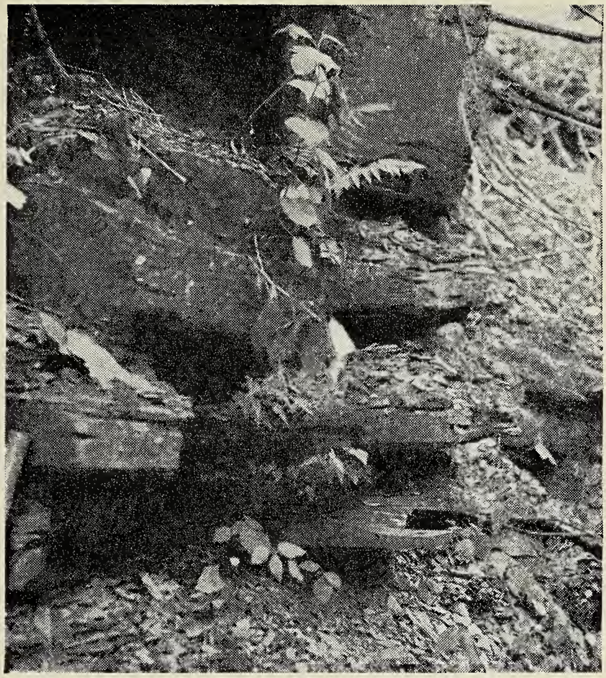


Figure 43 Basal Hasenclever sandstone; head of gulf northwest of Harter hill

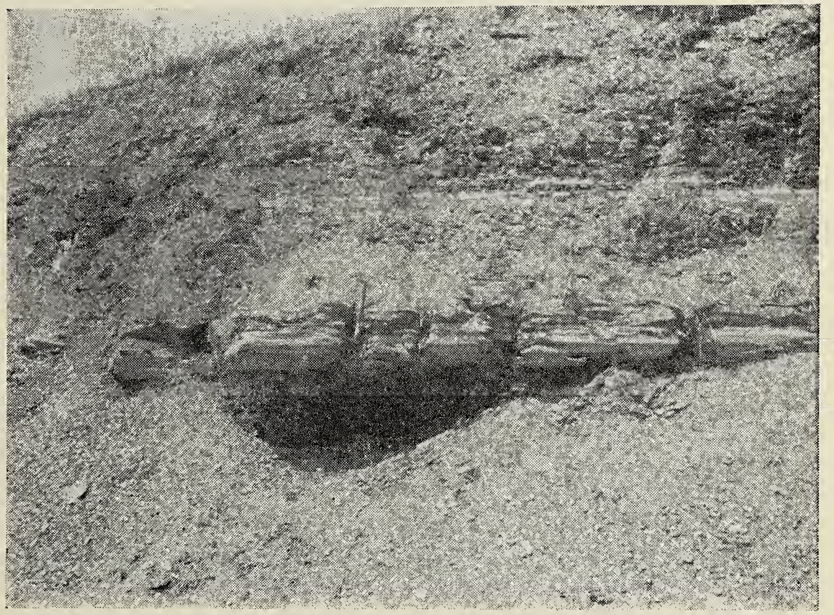


Figure 44 Harter shale beneath Hasenclever sandstone; upper terrace on northeast Hasenclever hill

These "Utica-Frankfort transition beds" have yielded the following forms on Starch Factory creek, east of Utica (Ruedemann, 1925), all rare:

Climacograptus typicalis Hall
Leptobolus insignis Hall
Camarotoechia (?) humilis Ruedemann
Geisonoceras sp.
Triarthrus eatoni (Hall)

The writer has collected a single specimen of *Cryptolithus bellulus* Ulrich (figure 65) from the Harter shale near its top on the stream south of Harter hill. This fossil supports the placement of the member in the Cincinnatian Frankfort formation, rather than the Mohawkian Utica with which it is lithologically less contrasting. In spite of the innumerable fragments of the shale that can be seen on many ravine walls, fossils are very rarely found.

Hasenclever member. The Hasenclever member (new) is composed of finely cross-laminated, buff-weathering, thin-bedded fine sandstones and interbedded greenish shales, typically exposed overlying the Harter member south of Harter hill (figures 43 and 44). The cross-laminated beds yield platy fragments having a warped, rippled-appearing surface, reflecting the concave surface of the laminae and are widely distributed below the outcrop and in the drift. Shale normally comprises a third to a half of the total, in beds of a few inches to a foot or more in thickness. Inasmuch as there are similar sandstones within the succeeding Moyer member, the beds cannot be identified on this character alone.

Moyer member. The Moyer member (new) is typically exposed along the lower course of Moyer creek, southwest of Frankfort. It is composed principally of gray, somewhat arenaceous shale, with beds to a foot thick of finely cross-laminated sandstone like those in the Harter member below. The proportion of sandstone to shale decreases toward the top of the member. The thickness is of the order of 400 feet. It is also excellently exposed along the stream flowing north-northeast of Frankfort hill into Ferguson creek and considerably so on several streams south of the Mohawk. North of the river, the member forms the top of the highest elevations and is exposed only in its lowest part. Ruedemann lists the following forms that have come from the Frankfort at unlisted localities:

Polyplectella mira Ruedemann
Mastigograptus laevis (Hall)
Inocaulis arborescens Ruedemann
Arthrostylus tenuis (James)
Pseudolingula progne (Billings)
Orbiculoidea tenuistriata Ulrich
Camarotoechia (?) humilis Ruedemann
Leptobolus latus Ruedemann
Trematis (?) sp. cf. T. dyeri Miller
Serpulites intermedius Ruedemann
Protoscolex giganteus Ruedemann
Cryptolithus bellulus (Ulrich)
Proetus beecheri Ruedemann
Geisonoceras frankfortense Ruedemann

Most of these if not all have been found in the Moyer member. But only the most patient collecting will yield specimens in the exposures.

The fauna of the Frankfort indicates that it is equivalent to the Economy formation of the Eden group, the lowest division of the Cincinnatian series.

SILURIAN SYSTEM

By W. L. Grossman

NIAGARAN SERIES

Clinton Group

The rocks of the Niagaran series in the Utica quadrangle are classified in four formations, the Oneida sandstone and conglomerate, Sauquoit sandstone and shale, Willowvale shale with a basal iron ore and Herkimer sandstone with limited amount of shale and hematitic sandstone. All are classified as in the Clinton group, though the Oneida formation has until recent years (Sanford, 1936) been considered a representative of the older, Albion group.

Oneida formation. The Oneida formation (Vanuxem, 1840) consists of 25 to 30 feet of quartz pebble conglomerate and sandstone disconformably overlying the Frankfort formation. The latter being of lowest Cincinnatian age, the most of the Eden and the Maysville and Richmond groups of the series are absent. Wherever exposed, the base of the Oneida is a three-tenths to five-tenths-foot layer of pyrite with quartz pebbles, filling shallow channels in the underlying shale. A lower, massive ledge, averaging five feet, succeeds and is composed of the coarsest conglomerate in the formation; pyrite tends to diminish upward and reworked pebbles and fragments of the Frankfort are common and responsible for pits on weathered exposures, though quartz pebbles to one and one-half inches prevail. Overlying are layers of conglomerate with smaller quartz pebbles and of coarse, friable sandstone with irregular and lensing shale partings that attain thicknesses of as much as a foot. The sandstone is buff and friable, cross-bedded layers passing into horizontally laminated beds. There are fine-grained sandstones with clay galls and clayey surfaces giving a shiny, slippery appearance; similar beds are present in the succeeding Sauquoit sandstones. Scour and fill structures, giant ripples and slump structures are found.

The formation forms a prominent break in slope or cliff where it outcrops and falls or rapids in streams. Good exposures are at the roadside near the junction of Moyer creek and its principal southern branch, in the stream in southwest Frankfort township that flows north into Moyer creek one and seven-tenths miles west of Corrado Corners, and along Starch Factory creek and in adjoining quarries one and three-tenths miles northwest of Frankfort hill.

Fossils are represented by comparatively rare worm burrows. The remarkably uniform quartz pebbles resemble those in the Shawangunk conglomerate of southeastern New York and they must have had a common source; though the two formations are not continuous along the Helderberg outcrop, they probably join in the subsurface beneath the Catskill plateau. The Oneida has been considered marginal to the finer textured Clinton group of western New York (Sanford, 1936) just as the Shawangunk overlaps northeastward along the outcrop from Pennsylvania.

Sauquoit formation. The beds overlying the Oneida formation and extending to an oölitic ore form the Sauquoit formation (Chadwick, 1918), having a variety of sandstone and shale lithologies, and a thickness of about 200 feet. The type section lies in the extreme southwest corner of the quadrangle. The contact with the Oneida is not sharply defined, but is considered to be the base of the dark-red to black, cross-laminated sandstone. Beds in this part of the formation have been called the Otsquago cross-bedded sandstone member (Chadwick, 1918); in the south branch of Moyer creek, these rocks, as shown by Hartnagel (1907) are 30 feet thick and they lose the prominent cross-bedded character in the section a mile to the east. The black sandstones, in which cross-bedding is in places developed to a remarkable degree, grade laterally into red, vitreous sandstones, some horizontally bedded. Conglomeratic sandstones are present, some with quartz pebbles or clay galls and shaly partings; phosphatic nodules have been found. A rather continuous section of black sandstones is shown along the stream one and seven-tenths miles west of Corrado Corners, with a thickness of 40 feet. Thus, the lower 30 to 40 feet of the formation is composed of rocks varying in character and primary structure, principally of black and red sandstones, commonly cross-bedded.

The succeeding beds of the Sauquoit are of alternating thin-bedded, olive-drab shales, fine-grained sandstones, conglomeratic layers with phosphatic nodules, cross-bedded, dark red sandstones and clay gall-bearing sandstones. About 100 feet from the base of the formation is a 20-foot zone of dark red, cross-bedded sandstone, friable and porous or hard and vitreous, and with clay inclusions that weather to form disc-shaped depressions; in one locality, a thin bed of oölitic hematite was found at the base. Similar, but thinner, red sandstone zones are found 30 feet higher and on the south branch of Moyer creek, near the top of the formation.

The upper 50 feet of the Sauquoit consists of green shale and interbeds of thin, fine-grained sandstone which are somewhat calcareous and fossiliferous. Similar rocks are intercalated in the lower parts of the formation. The surfaces are often found with small ripple marks, interference ripple marks and a few giant ripples with wave length as much as 30 inches; these are marked with tracks and trails of organisms and many beds have innumerable linear and spiral castings and elevations and depressions of undetermined origin. Locally, dikelike linear belts of sandstone within the shales look like channel fillings, though it is more probable that they are more indurated parts of the deposits.

The finest sequence of the formation is along the south branch of Moyer creek which presents a fairly continuous section.

The lower black sandstones of the Sauquoit are in places ostracod-bearing. The abundance of trails and castings in other lithologies is evidence of the presence of abundant life at the time of their deposition. The fauna of the formation has not been critically studied.

Willowvale shale. The Willowvale formation (Gillette, 1942) extends from a bed of oölitic hematite ore at its base to a two-foot bed of hematite-rich calcareous sandstone in the base of the Herkimer formation, the formation being about 30 feet thick.

Overlying the Sauquoit is a one to one and a half-foot bed of hematite ore having oval and discoidal oölites averaging about one millimeter in diameter. The ore diminishes in thickness eastward and the oölites become smaller. Exposures are few, the best being in Mallory creek, near the west boundary of the quadrangle; 2.5 feet are exposed of a mass of discoidal oölites of one to 1.5 millimeters diameter; another is eight-tenths of a mile southwest of Frankfort Center in the small tributary of the stream joining Ferguson creek in Frankfort Center, the ore being thin-bedded and bounded by hematite-stained sandy layers two feet thick. Several long-abandoned quarries are distributed over the area, particularly in the eastern third but most are partially filled and overgrown, and the ore no longer is accessible.

The Willowvale formation above the ore is of about 30 feet of green, thin-bedded shale with interbeds of fine-grained calcareous sandstone and siltstone, the latter increasing toward the top. This change is best shown in the vicinity of Clinton, west of the quadrangle, where sandy beds become dominant; in the eastern part of the Utica quadrangle, shale comprises nearly the whole of the Willowvale formation.

Good exposure is present along Mallory creek one and three-tenths miles west of the county line in the southwest part of the quadrangle, and in the south branch of Moyer creek where the uppermost beds have abundant, poorly preserved fossils, principally brachiopods and trilobites.

Herkimer formation. The Herkimer formation (Chadwick, 1918) comprises about 80 feet of fine to coarse-grained, calcareous, highly fossiliferous sandstones and interbeds of gray shale; there are limited numbers of beds of clay gall sandstone and clayey interbeds similar to those in the Sauquoit. Some of the sandstones contain abundant accumulations of phosphatic nodules and others, particularly the clay gall layers, have pyrite grains; quartz pebbles to three-tenths of an inch in diameter resemble those in the Sauquoit conglomerates.

At the base of the formation is a three-foot, hematite-rich, somewhat oölitic, sandy, fossiliferous calcareous ledge, in places principally a calcareous sandstone changing within a few feet into nearly wholly hematite. This seems to correspond to the lower of two hematite-rich layers in the basal Herkimer in the Clinton region to the west. Inasmuch as the Herkimer is fully exposed only along the south branch of Moyer creek, there may be other hematite layers that have not been disclosed. Near the top of the formation are one and one-half feet of thin-bedded, ferruginous, calcareous sandstone overlying two feet of hematite-stained calcareous sandstone, forming a falls in South Moyer creek. There is an abundance of greenish shale interbedded in the formation.

The fauna of the formation has not been studied but bryozoans and brachiopods are evident in several of the beds.

Lockport (?) formation. On South Moyer creek, a 55-foot unit of blue-gray shale and calcareous shale overlies the Herkimer formation and is beneath the green shale at the base of the Vernon; the classification of the beds is uncertain and they are referred doubtfully to the Lockport group. The only other good exposure is along the tributary of Starch Factory creek just west of Frankfort hill. In sections two miles southwest of Frankfort, the interval between exposed Herkimer sandstone and exposed Vernon shale is such that the thickness of the Lockport must be reduced if the beds are present at all.

The shale is thinly bedded and finely laminated, traversed by closely spaced fractures that result in its breaking into small chips. The intercalated calcareous argillites form lensing ledges that appear as channel fillings but, inasmuch as the laminas are horizontal within them, the disappearance is to a degree a result of the solution of calcium carbonate from once continuous beds. Near the base of the formation are beds of edgewise conglomerate with varyingly oriented slabs in a calcareous argillite matrix. In the only locality where the contact with the basal green shale of the Vernon was seen, the tributary of Starch Factory creek, the blue-gray shale of the Lockport seems to grade into the overlying formation. Inasmuch as there is considerable disconformity between the attenuated Lockport dolomite and the Vernon west of the area, the dark shales may be a basal part of the Cayugan series. Though corresponding in position to the Pittsford shale far to the west, they are of quite different character. Fossils have been seen in the formation and until its westward continuity has been discerned it is considered, doubtfully, as of Niagaran age.

CAYUGAN SERIES

Vernon shale. The Vernon formation (Clarke, 1903) comprises about 200 feet of deep red, poorly-bedded mudstone with thin streaks and beds of bright green color. Numerous slickensided fractures evidence its compaction, probably with reduction of calcareous content. It is exposed at many localities, best along Sauquoit creek in the southeast corner of the quadrangle; the lower beds are well displayed on the south branch of Moyer creek.

The basal few feet of the Vernon are persistently of green-colored shale otherwise similar to the overlying red shale. Throughout the formation lamination and bedding is obscure, the rock breaking along the innumerable minor, commonly slickensided fractures. In some cases green streaks cut the bedding and have vertical orientation, probably reflecting the reduction of the iron in originally red shale; the green layers may represent beds in which there was sufficient organic material to reduce the contained iron. The formation has not yielded fossils but is lithologically like the Vernon shale of central New York and continuous in outcrop with it.

Camillus formation. The Camillus formation (Clarke, 1903), the youngest bedrock in the Utica quadrangle, is limited to the southwestern margin of the area and is represented only in its lowest 100 feet. It consists of olive-drab to blue-gray, thin-bedded shale and blue-gray, ash-gray weathering, finely-laminated, fine-textured limestone or waterlime. Ten feet from the base is a two-foot layer of rounded, frosted, small pebbles of quartz in a finer matrix and a similar band is 65 feet higher and five feet thick, the pebbles being most abundant toward the top. The waterlimes are irregular in distribution and dominate over shales at several horizons; some exhibit mud cracks extending through the layers, bounding polygonal blocks of the rock (figure 24). The upper 20 feet of the exposed Camillus is almost wholly waterlime with clay partings; single beds being of three to eight inches.

The only exposure of the formation is in the stream flowing through Sauquoit, one-half mile above the village.

OVERLYING ROCKS

Younger Silurian and lower Devonian limestones are exposed within a mile of the south line of the quadrangle in the hill that lies northwest of Dayville. They have not been studied but are well shown in some parts in quarries in the hill.

PALEOGEOGRAPHY

INTRODUCTORY STATEMENT

Paleogeography is the restoration of conditions that prevailed during the geologic past and must be read from the character and distribution of the successive rocks. These are fundamentally a reflection of movements that affected the crust of the earth. Spread and retreat of marine waters resulted from absolute rise and fall of the oceanic surface or from the fall or rise of the earth's surface in the immediate region. Great uplifts such as formed mountains where the sea had been or elevated lands, already present, produced streams that removed materials precedingly laid or accelerated the flow of those that were formerly sluggish, permitting them to cut their valleys more rapidly and carry coarser materials to their mouths and the margining seas. Movements control the form and position of the lands and the shallower and deeper parts of the seas and in turn the direction of marine currents that bear the stream-derived sediments.

It is from the study and interpretation of the stratified rocks that form and depth of ancient seas is gained and the nature of the lands and the climates that affected them. Stream and marine deposits can be distinguished not only by the forms of life contained but by their particles and their lamination. Those of coarse texture must have been laid by streams or currents competent to carry the grains to their place of rest but not able to move them farther; and successively finer particles have been dropped by less rapidly moving waters. Inasmuch as waters of shallow depths in wind-swept seas are kept in agitation by waves and along shore currents, finer materials may be kept in suspension, laid during periods of calm or carried to depths where agitation is insufficient to prevent their settling. The effect of waves and tides diminishes very rapidly with depth, the greatest waves producing imperceptible movement at a few hundred feet; the lamination of these deeper or quieter water beds lacks the rippled surfaces, channels and cross-lamination that result from the shifting of materials in the shallower or more disturbed near-shore zones.

The stratified rocks within the quadrangle present a part of the story but it is only from the gathering of data from the greater region that a connected record can be gained.

CAMBRIAN PERIOD

The Little Falls dolomite, the only Cambrian formation within the area, formed during the closing stages of the Cambrian period. The dolomites, with their *Cryptozöon* reefs, and intercalations of cross-bedded quartz sandstone, are suggestive of the shallow water deposition near low-lying lands of quartz-bearing rocks. The formation is the attenuated border of a thicker sequence that spreads southward into Pennsylvania. New York State had a low peninsula extending from the region of the present Lake Ontario eastward to the northern Adirondacks (Kay, 1942); to the north was an embayment that reached to Ottawa and beyond and along the southern shore of which were laid the Cambrian deposits of the northwestern Adirondacks. The northern shore of the Little Falls sea coursed south of westward from the central Adirondacks to the southwest corner of the State, and hence Little Falls beds are absent along the Black river and in Ontario north of Lake Ontario but present in deep wells that have been drilled south of the lake.

ORDOVICIAN PERIOD

The rocks representing the two older epochs of the Ordovician, the Canadian and Chazyan, are unrepresented in the area, though the earliest Canadian Tribes Hill formation approaches its limit on the southeast and may be present at depth in that part. This sea had similar distribution to that of the late Cambrian but was less extensive in the immediate region, though somewhat more so along the northern side of the Ottawa embayment north of the Adirondack peninsula. Thus the Utica area was a lowland during a large part of the Ordovician, until the coming of the Mohawkian seas.

The Mohawkian series outcrops over the greatest part of the quadrangle and has greater thickness than any other. Moreover, the rocks reflect the changing conditions that pertained in the Adirondack belt and eastward during the epoch. Whereas the limestones of the Chazyan series had been laid in the Champlain trough or belt of depression in eastern New York, those of the succeeding early Mohawkian, the Black River group, are more fully developed and for the most part limited to the sinking Rideauan trough that formed in a belt extending from Ottawa through the Thousand Islands toward Syracuse. Lower Trenton time marked the introduction of the Adirondack arch, a northeast-trending belt that was depressed less than its two flanks. With the advent of the Vermontian Disturbance, a period of great uplift in western New England, the Champlain trough was deeply depressed, gaining a mile of muds and sands; the changing facies of the Denmark formation from shallow-laid limestone at the northwest to thicker, deeper-laid argillites at the southeast within the quadrangle, is indicative of a flexure into a belt to the southeast that sank more rapidly than it was filled by sediments eroded from lands in western New England. In later Trenton time, the Cobourg limestone formed to the northwest of a broad arch that was flanked by Utica muds on the southeast, in the Herkimer region and eastward. Thus the Adirondack belt that had been less subsiding than its flanks in early Trenton came to be more deeply depressed than the area to the northwest in later Trenton and to lie on the margin of the still more deeply depressed Champlain belt farther east. And finally, further eastward tilting of the area permitted the transgression of the late Utica muds into the region to the west.

The Black River group attains a thickness of more than 250 feet along the axis of the Rideauan trough and of the three formations, only the Lowville, having a tenth the thickness of the whole, is present in the quadrangle. The basal rocks have been derived from the sands and clays that formed on the margin of the advancing sea. The overlying limestones are of fine texture, and plane lamination, but there are occasional ripple marks and mud cracks, conglomerates of fragments like adjoining continuous beds and vertical burrows of worms or other organisms; marine fossils are common but difficult to extract because of glassy fracture of the limestone. The characters suggest that there were lime muds laid in shallow water on broad flats margining the extensive seas to the west; studies in northwestern New York and Ontario have shown that rocks of this lithology pass into abundantly fossiliferous, more shaly limestone in the deeper part of the Rideauan trough.

The Rockland is also best developed in the Rideauan trough and in the Champlain trough east of the Adirondack axis. The sea coursed irregularly over the intervening area, and is represented by small thickness in scattered areas. The distribution in the Utica quadrangle and to the east evidences the sinuous margin of the sea. The Kirkfield and Shoreham show in their progressive southeastward thinning and the disappearance of the latter at Canajoharie, and in the relative increase in proportion of coarse-textured, coquinal limestones and calcite sandstones, their approach toward the Adirondack axis. Giant ripples were formed by tidal currents in the coarser beds in shallow water and the abundant shells drifted into heaps and were fragmented. The southeastward convergence or thinning is thought to be reflected in the coarser texture rather than to be the result of intervening or following erosion, though the thinning of the Kirkfield is in part through overlap, a result of its having been laid in an advancing sea. The Shoreham is distinctive in that it is the last of the Ordovician limestones in the Champlain belt, the succeeding mudstones and sandstones marking the rise of lands far to the east in middle Trenton, Denmark time.

There is a progressive change in the Poland and Russia members of the Denmark from the shallow water, coquinal limestones of the Black River valley to the black shales of the Mohawk below Canajoharie, a part of the change being shown in the Utica area. It was not until the seas crossed the depressed Adirondack arch in Poland time that the influence of the streams carrying sands and clays from lands formed in Vermontian Disturbance was effective in introducing argillites in the Utica area.

The southwestward disappearance of the Cobourg limestone seems due to the Rust member's grading into black shale and the Steuben's not having been laid. The limestones do not continue the change into successively deeper water sediments exhibited by the Denmark limestone, and the younger Cobourg beds are coarse-textured calcite sandstone not grading directly into the middle part of the Utica shale. Moreover, younger Cobourg limestones come in northwestward along the lower Black River valley, the Upper Utica coming to succeed them conformably in southeastern Ontario. The older Utica shales are limited along the Mohawk to the region to the east of the quadrangle and seem to have been separated in the time when the later Cobourg was being laid by a low arch that prevented the westward spread of the muds from the western Champlain trough. More thorough faunal study of the black shales along West Canada creek will be needed before the relations of Cobourg and Utica rocks are fully understood.

In latest Trenton time, as the upper Utica shale of area was laid, the entire region was depressed and tilted southeastward. The shales are fine-textured plane-laminated and contain remains of delicate graptolites, laid in deeper water than the underlying limestones in the northwest. They lie with disconformity on the Cobourg in the northwest and probably with conformity on older Utica shale in the east; they increase from 200 feet in northwestern New York to about twice that amount in the northwest part of the Utica quadrangle.

The Cincinnatian epoch is represented only by the Frankfort shale and sandstone that reflect the shallowing of the sea in their coarser textures and the finely cross-laminated sands. This may have been partially a result of the filling of the earlier depression by sediment but, inasmuch as early Cincinnatian seas are of limited extent elsewhere in the interior of North America, there may also have been a lowering of sea level. Subsequently, the region was raised above the sea in a movement that affected the whole Adirondack region, for younger Cincinnatian sediments are thick and continuous in Quebec, Ontario and western New York and lack only the Richmond group in the region immediately to the west. In the absence of latest Ordovician beds, the rocks of the quadrangle do not evidence the advent of the great Taconian Revolution that produced coarse sediments in Pennsylvania and great disturbance in western New England at the close of the period.

SILURIAN PERIOD

The representatives of the Niagaran and Cayugan series in the southern part of the quadrangle were formed along the eastern margin of an embayment that extended northward from central Pennsylvania. To the east was lowland along the south flank of the Adirondack dome. Whether the great faulting in the Adirondack region that gave the present block mountain structure was of early Silurian date or a little later has not been conclusively proven; in any case, the Adirondack area was relatively higher than the region to the south and west and probably higher than the great thrust sheets that had been formed in the Taconian Revolution.

The Oneida formation has quartz pebble conglomerates that were laid in shallow water on the margin of the Clinton sea. These pebbles, similar to those in the Shawangunk conglomerate of much greater thickness in southeastern New York, are believed derived by streams that flowed westward from the crystalline core of a land occupying about the present position of southwestern New England, for it is in that vicinity that the sediments are coarsest. Rocks from this source, first laid in an earlier epoch of the Silurian, reached the Utica region when seas advanced from the southwest in early Clinton time and the Oneida is the conglomerate formed along the shore of the sea. The subsequent Clinton deposits, the Sauquoit, Willowvale and Herkimer formations, were laid in similar or more seaward position in the gradually depressed eastern margin of a trough that extended westward to the Cincinnati arch, passing northeastward through the western end of Lake Erie and into central Ontario.

Oölitic iron ores are prevalent in this belt southward to Alabama where they comprise the important deposits at Birmingham. The fact that the ore is partially of replaced fossils is indicative that the iron oxide has taken its present form after calcareous rocks were laid and the very extent of the hematite layers in essentially contemporaneous beds reveals that the iron was introduced practically as the layers were deposited. It is thought probable that the waters of the Clinton seas gained iron, perhaps in the form of the hydroxide, from streams flowing from regions of volcanic rock to the east and that this was laid with and replaced the beds soon after they were laid. The oölites may in themselves have been formed by the formation of successive layers of hydroxide about small particles as the deposits were forming.

The later Niagaran (Lockport) epoch is represented in the area by shale; the correlation of the formation is not established. The Vernon shale represents the northeastern limit of a great red mud delta that extended from eastern Pennsylvania southwestward to Virginia and westward to beyond central Pennsylvania and toward Buffalo. This is believed to have restricted the ingress of marine waters into a basin lying to the north so that, with high evaporation, the salt and gypsum deposits of western New York were laid. These are present in the Camillus formation farther west, though none has been seen or reported within the quadrangle. The Camillus deposits were formed in waters of decreasing salinity within the basin and are clays and lime muds that were laid in the shallow water of the partially enclosed estuary.

STRUCTURAL GEOLOGY

SEDIMENTARY STRUCTURES

The rocks in the region exhibit such primary sedimentary structures as lamination and bedding, cross-lamination, ripple marks, mud cracks and subsolifluction phenomenons. Lamination is nicely shown in the Utica shales and in the lake clays. Cross-lamination is shown in the sandstone interbeds in the Little Falls formation, the sandstones of the Utica and of the Silurian, and in the calcite sandstones or limestones of the Steuben member of the Cobourg formation. Ripples of two to three-inch wave length are frequent in the Sauquoit formation, rarely present in the Lowville. Large ripples are represented in the

Kirkfield, Russia member of the Denmark and the Sauquoit and are of differing sorts. They are of the order of 18-inch to 24-inch length and have convex crests, concave troughs and sinuous trends. Those in the Kirkfield are in coarse-textured limestones or calcarenites that do not show distinct cross-lamination within the bed; they are present in most exposures. The Russia member of the Denmark has ripples of similar form that are in finely cross-laminated silty limestone; they are well shown on City brook, east of the quadrangle boundary. Those in the Sauquoit, present in two horizons along South Moyer creek, have similar form but are in fine sandstone. The first have been attributed to the effect of storm waves and tidal currents and are thought symmetrical. The second show by their cross-lamination that they have not remained stationary, but have shifted and to that degree they are current-formed; the third may be of similar form. All seem to have been made in relatively shallow water. Mud cracks are rarely present in the Lowville, but more commonly found in the Camillus.

The subsolifluction phenomena are of peculiar interest because they resemble structures formed by subsequent folding (Hahn, 1913). The most famous of these are displayed below the high dam at Prospect, at the head of the Trenton Falls chasm. Similar structures are present but less clearly shown in the Rust member of the Cobourg formation at several localities, as along the Erie Canal feeder a mile west of Steuben creek and in the ravine one and one-half miles northwest of Poland. At Prospect, there are 15 feet of normal interbedded limestones and shales south of the spillway; this unit is replaced to the north by one having similar beds that are broadly folded into northeast-trending anticlines and synclines and have marginal limestone breccia. Some of the beds in the undisturbed section can be traced into the breccia, becoming broken into isolated blocks and slumped below the adjoining level. The whole is truncated by a horizontal but lensing bed of coarser limestone. For whatever reason, rocks like those in the regular succession have slumped into a channel and become folded shortly after the whole was laid in horizontal fashion; possibly the clays flowed out from beneath and the limestone beds slid into the depression they opened. These and other phenomenons have been studied extensively along the Black River valley (Chenoweth, 1952), where they are believed to be post-depositional, however.

Along south County Home creek, just east of the quadrangle southeast of Harter hill, interbedded dark shales and calcarenites have been sharply folded and somewhat faulted, then truncated by succeeding beds. In this case there has been no brecciation and the beds have been deformed as a unit. They are best shown beneath the high falls one-half mile above the road but are more disturbed in a south tributary a short distance downstream. Similarly contorted beds on a smaller shale can be found in most exposures of the laminated lake clays.

Secondary structures in the sediments include stylolites, concretions and compaction structures. The first are abundant in the Lowville, forming intertonguing pillars and troughs in section with seams of clay delineating them sharply. These are the result of the solution of material along bedding planes with interpenetration of the rock on the two sides. The Lockport (?) shale of the Silurian has lensing masses of indurated shale that pass laterally into laminated shale; though these at first seem as channels, it can be seen that the lamination in the indurated parts is plane and evidently there has been leaching of soluble material from the formation to an incomplete degree; the indurated rock may approach more closely the original character of the formation than the shale. Some of the calcilutite beds of the Denmark formation have strikingly knobby surfaces with shale with concave bedding planes separating them; these are suggestive of the same sort of process for again the lamination that has been observed in the limestone seems horizontal or finely cross-laminated. The shales should be the insoluble residuum of the continuation of the adjoining limestone.

Few of the formations have abundant concretions. The Utica has somewhat ferruginous beds that seem to be mineralized silty shale. In one instance, along Reels creek, a 12-foot lens of this lithology has radiating calcite veins and is an enormous septarian concretion. There are small calcite concretions in the Vernon shale along South Moyer creek. And occasionally limonitic and pyritic concretions are present in the Frankfort.

Of contrasting nature are the crystalline-lined geodic cavities or vugs in the Little Falls dolomite. These are openings that have been partially filled by the precipitation of quartz from penetrating solutions. The cavities frequently contain beautiful, doubly-terminated crystals of quartz, some attaining lengths of an inch or more. These are locally known as Herkimer diamonds or Middleville diamonds and are the most attractive minerals that can be gathered in the area.

FOLDS AND FAULTS

The major structure of the region is homoclinal; that is, it dips in a single direction. The tilting has been generally south of southwestward but as can be seen from the structure contour map, is more westerly in the southeast than in the northwest. No prominent folds have been recognized. A plunging nose is suggested along the Cold Brook axis, in that the rocks to the west are westerly dipping, whereas those southwest of Poland dip southward; moreover, the elevation of the Trocholites zone below Brayton Corners seems higher than would be the case if the structure were truly homoclinal. The definition of this structure is considerably conjectured for there are too few points of reference. It may be significant that it is along this axis that the Cobourg disappears from the west and the Russia member of the Denmark thins from both directions. It is thus probable that the axis is one that developed as the beds were being laid and was subsequently tilted as the regional homocline formed.

The structure contours that have been drawn on the base of the Hasenclever sandstone member of the Frankfort indicate that there is no prominent structure affecting the regional dip. These contours are only approximately correct; exposures are not sufficiently frequent; there is uncertainty that the heavy sandstones begin at a uniform stratigraphic horizon and the determinations have been made by aneroid with subsequent rereading in more critical localities.

That there are minor folds is indicated by slight reversals in dip in certain sections and variation in the direction and magnitude of dip. It is more clearly shown in the presence of small anticlines such as that which brings the Cobourg limestone to the surface west of South Trenton on Nine Mile creek and in the Denmark along West Canada creek below the mouth of Steuben creek. In each case, the dips on the flanks are of the order of five degrees. Greater dips are represented in the Cobourg northwest of the road that cuts the extreme northwest corner of the quadrangle; these reach as much as 15 degrees and surface a hill rising 60 feet above the road a mile southwest of Trenton (Barnevelt). And in the stream north of the abandoned quarry west of Newport, the dip on the top of the Rockland limestone increases northward from 4°, to 20°, N. 20° W.

The only fault of any magnitude is that along Shedd brook, three-tenths of a mile from its mouth. This has a northward trend and throw of the order of 30 feet. The brook passes over a small falls on the Trocholites subzone at the base of the Poland member of the Denmark to the Rathbun member and the Shoreham; then, below the fault, it flows on beds some ten feet from the base of the Poland and farther downstream again has a falls over the Trocholites subzone. The dip to seven degrees south-southwest in the quarry north of the mouth of the stream may be related to the same structure. Numbers of small faults, of throw of two to four feet, are present in the Frank-

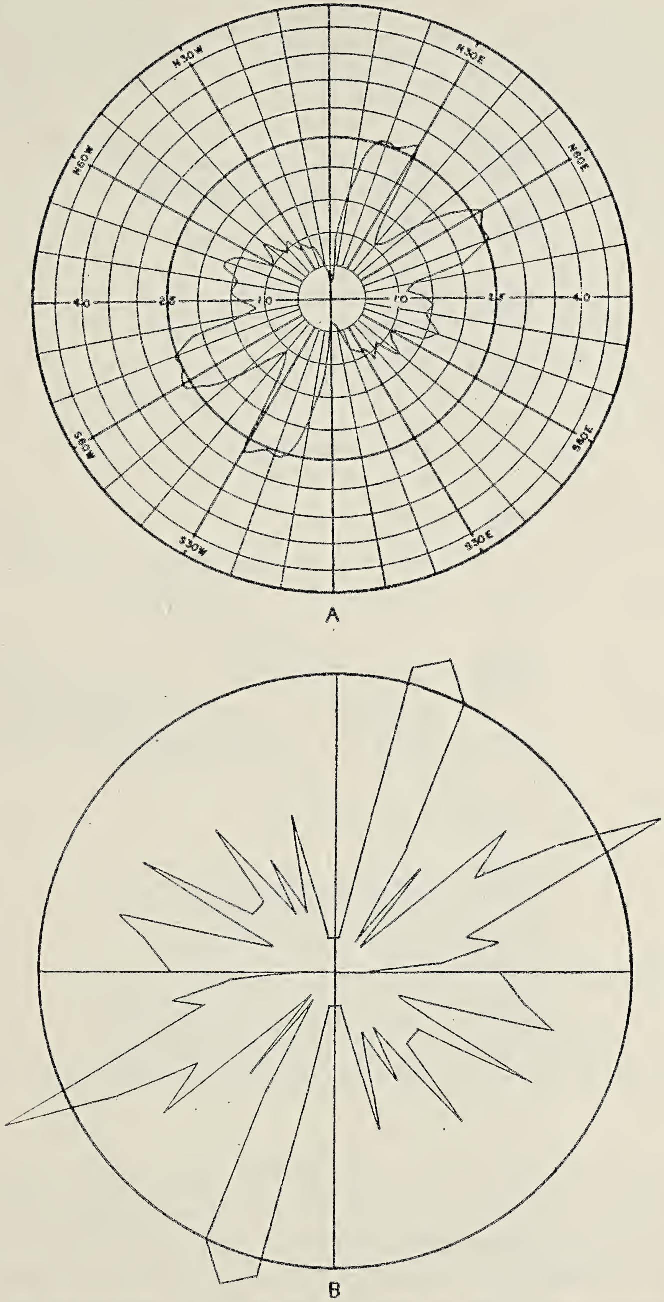
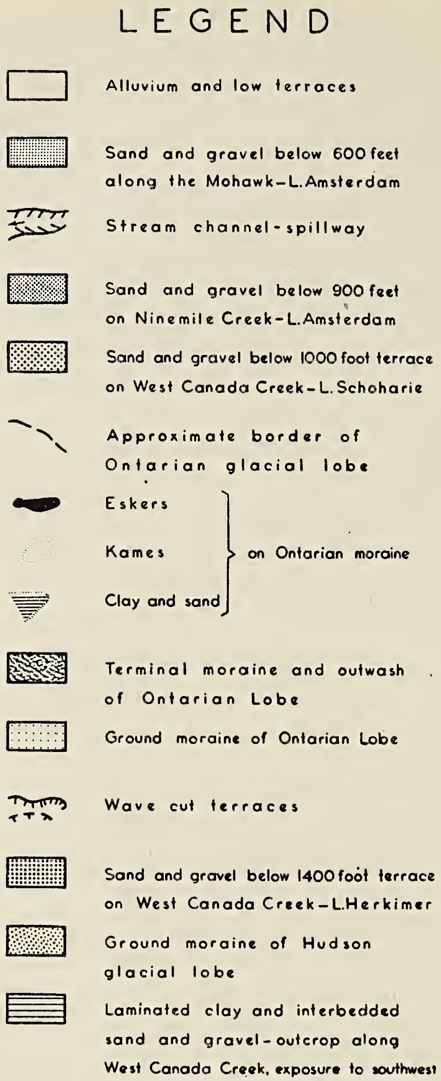


Figure 45 Distribution of joints in the Utica shale of the Deerfield hills; 165 readings

A plotted with recorded percentage that of joints lying within ten degrees of directional ray; circumference at 50 per cent

B plotted by number on each ray of five degrees; circumference at ten readings


LEGEND
Alluvium and low terraces
Sand and gravel below 600 feet along the Mohawk–L. Amsterdam
Stream channel-spillway
Sand and gravel below 900 feet on Ninemile Creek–L. Amsterdam
Sand and gravel below 1000 foot terrace on West Canada Creek–L. Schoharie
Approximate border of Ontarian glacial lobe
Eskers
Kames
Clay and sand
on Ontarian moraine
Terminal moraine and outwash of Ontarian Lobe
Ground moraine of Ontarian Lobe
Wave cut terraces
Sand and gravel below 1400 foot terrace on West Canada Creek–L. Herkimer
Ground moraine of Hudson glacial lobe
Laminated clay and interbedded sand and gravel-outcrop along West Canada Creek, exposure to southwest

fort beds in the lower part of the valley of Moyer creek. These strike about N. 85° W., dip northward and are down-dropped on the north, thus being apparently normal faults.

In the quadrangle to the east is the Little Falls fault of considerable throw, down-dropped on the west. And to the north in the Remsen quadrangle is the Prospect fault, a reverse fault at Prospect with a stratigraphic throw of about 140 feet. This latter fault approaches the northwest corner of the Utica area.

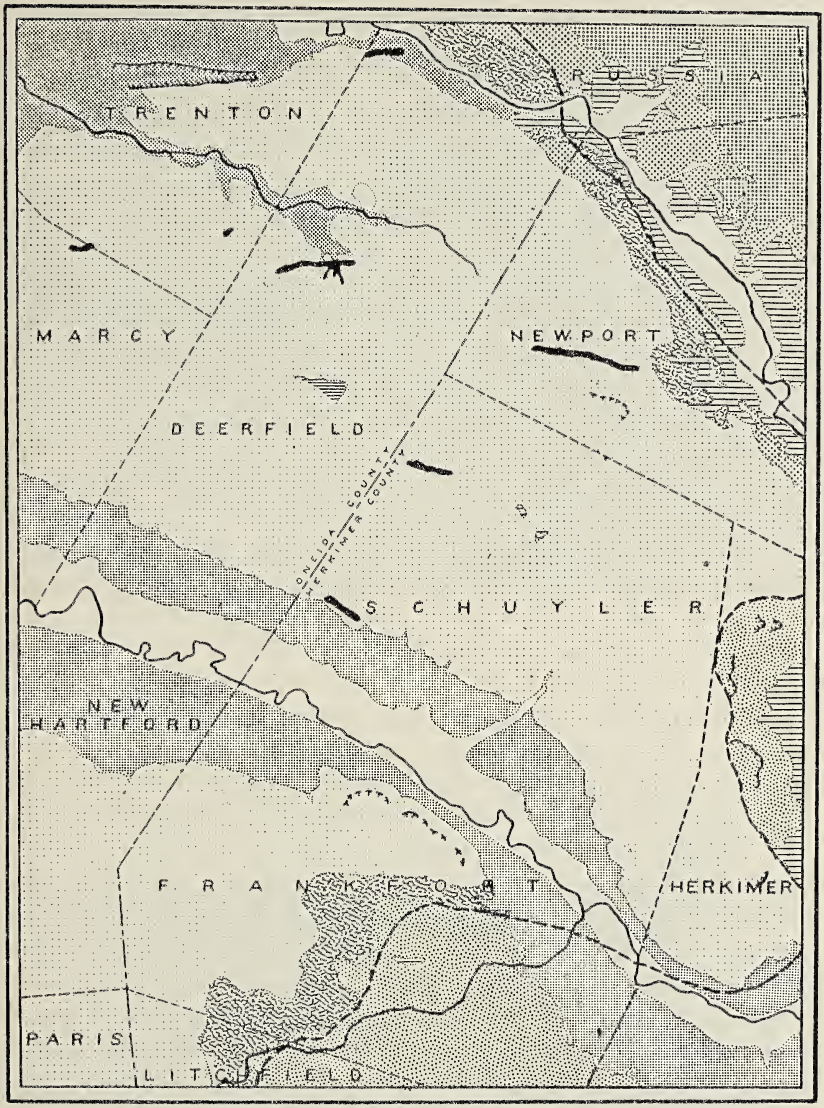


Figure 46 Glacial map of the Utica quadrangle

JOINTS

A number of readings were made on the joints in the Utica shale of the Deerfield hills (figure 45). These give a prevalence of trends in two directions as shown on the diagram. The significance of the orientation is not evident and insufficient observations have been made elsewhere to learn whether there is similar distribution in other parts of the quadrangle. The pattern is comparable to that in quadrangles to the south (Parker, 1942).

GLACIAL GEOLOGY

INTRODUCTION

The glacial deposits of the Pleistocene period were laid on the bedrock after uplift and erosion during the long time that elapsed following the Silurian period. The youngest of the rock formations in the immediate area is the Camillus of the late Silurian. By the time it was laid, the Cambrian Little Falls dolomite had come to be nearly a half-mile below the sea along the southern margin of the quadrangle. And inasmuch as there are thousands of feet of younger marine sediments in the region immediately to the south, the Camillus was a mile or so below the sea by the close of the Paleozoic era. Subsequently, the rocks were uplifted and tilted, for prior to the coming of the ice, the bedrock had been carved into the major relief features of the region, the principal ranges of hills and the Mohawk and West Canada valleys.

The advancing ice reduced some of the higher elevations and deposited till on the rock or on drift laid along its margin, giving the region a relatively smoother surface than it had had. As glaciers advanced and subsequently melted, their fronts and the higher rock and till surfaces surrounded basins that filled to form lakes that with the gradual disappearance of the ice were reduced to successively lower elevations with the opening of new outlets. Thus, there are materials and surface forms resulting from glacial erosion and till deposition as well as from the filling of lake basins and the cutting along their shores.

The ice sheets that covered the area are among those that extended over the whole of northeastern United States in the late Pleistocene Wisconsin stage. There were other advances of which no record has been found for deposits of earlier sheets are known to the south in Pennsylvania and New Jersey. The writer has observed few grooves or striations on bedrock that would indicate the directions of movement of the base of the glaciers but others (Brigham, 1931) report that in adjoining areas there have been both southwestward and southeastward trends. Grooves on the surface of the Rockland limestone at Newport trend N. 30° W., S. 30° E. Rock exposure is of limited extent and much is of such character that markings would not have been preserved if they had even been formed. They might be found on some of the more resistant Silurian sandstones south of the Mohawk. That the local rocks were eroded is evidenced in the abundance of rocks of local origin in the glacial till; for example, blocks of Frankfort shale are most common in the drift south of the Deerfield hills in association with black shale and limestone such as outcrops only in this or immediately adjacent map areas.

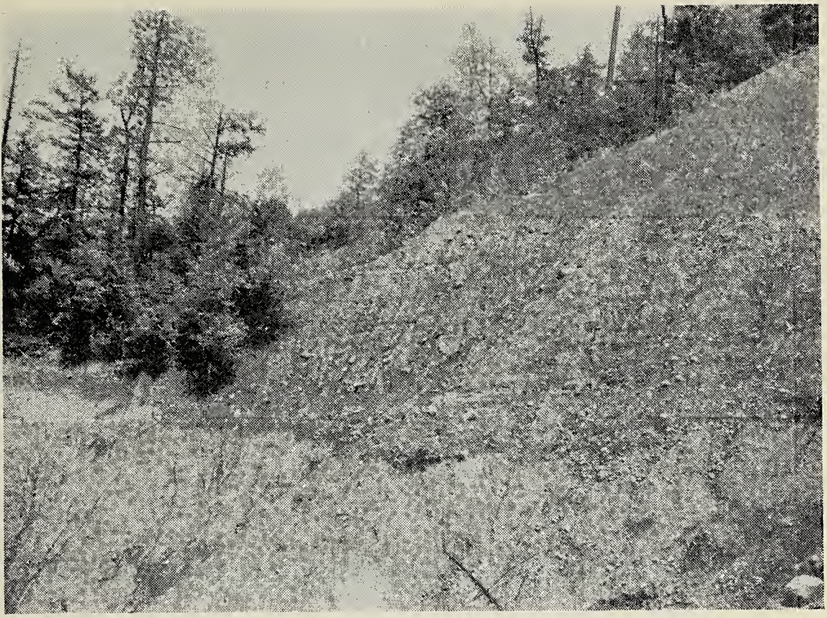


Figure 47 Till overlain by stratified, boulder-bearing sands; bluff south of Middleville

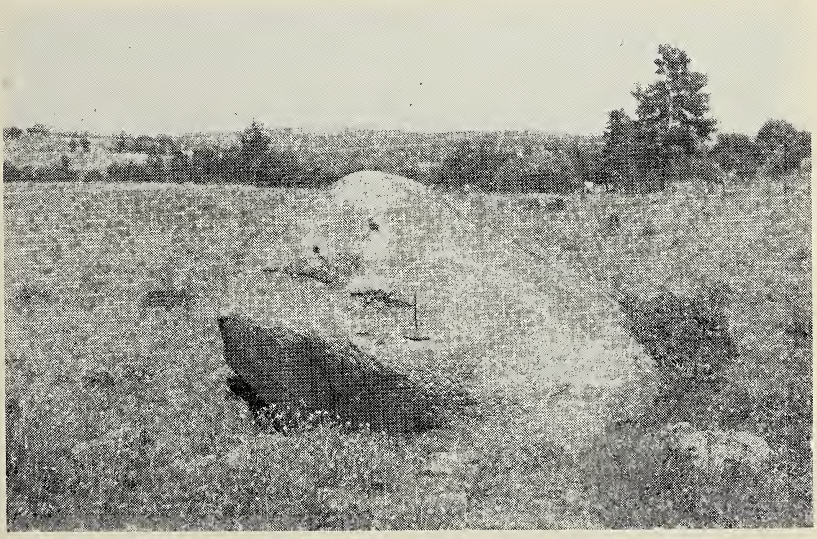


Figure 48 Erratic boulder of anorthosite below road northwest of Smith hill

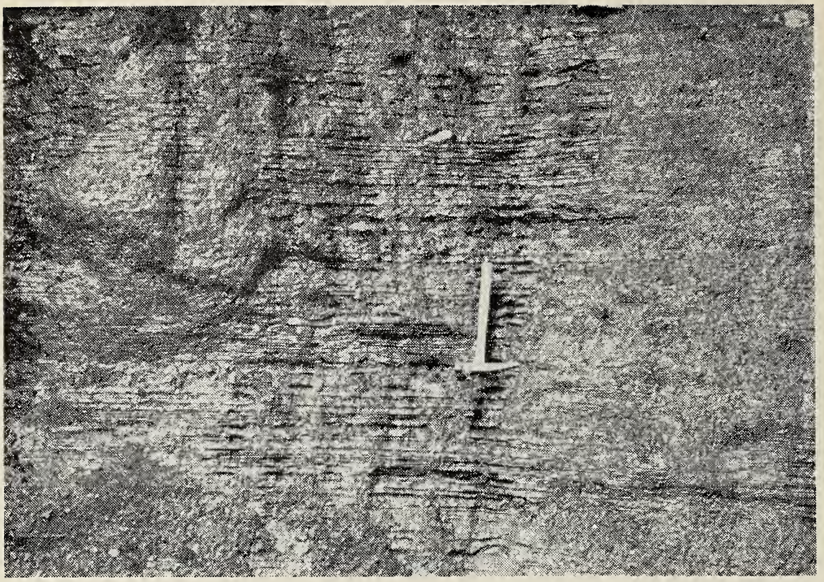


Figure 49 Laminated clay below bridge at about 900 feet; Sterling creek

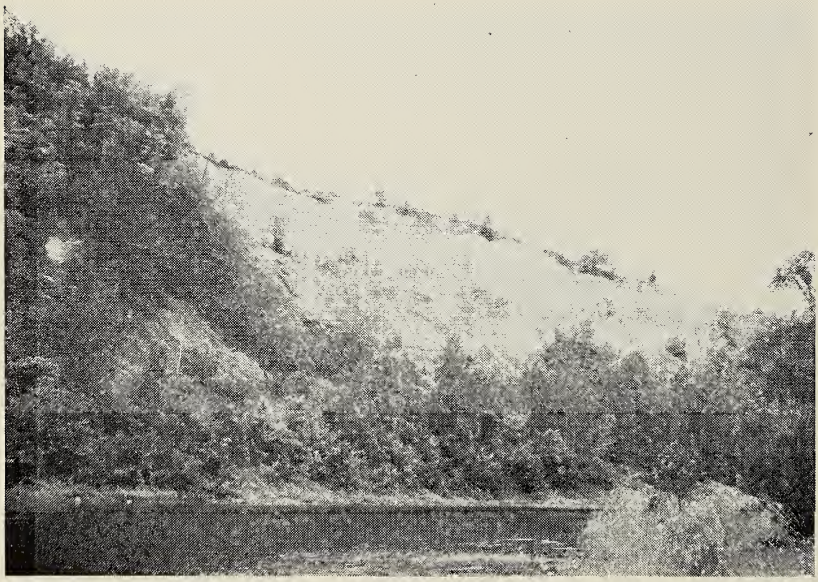


Figure 50 Laminated clay overlain by boulder-clay; West Canada creek below Shedd brook

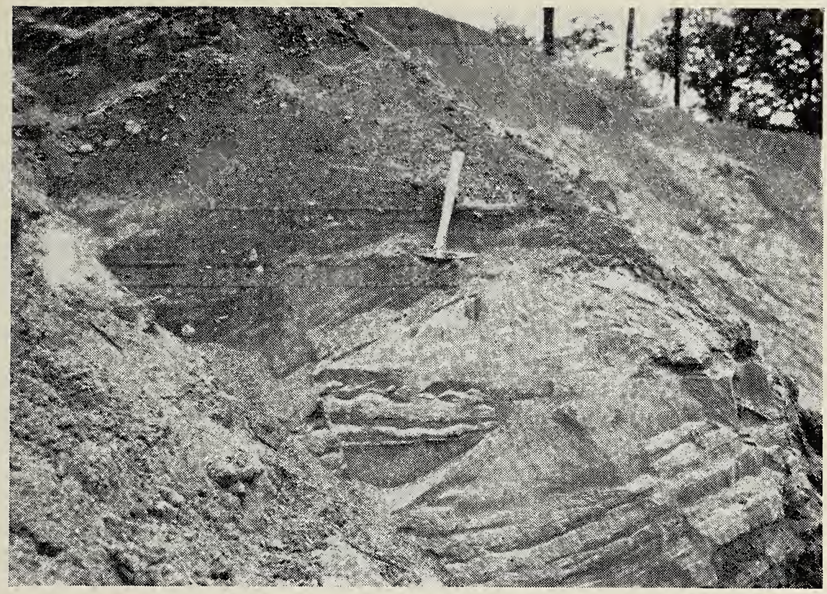


Figure 51 Sand and gravel with small faults; Steber pit, northwest of Poland

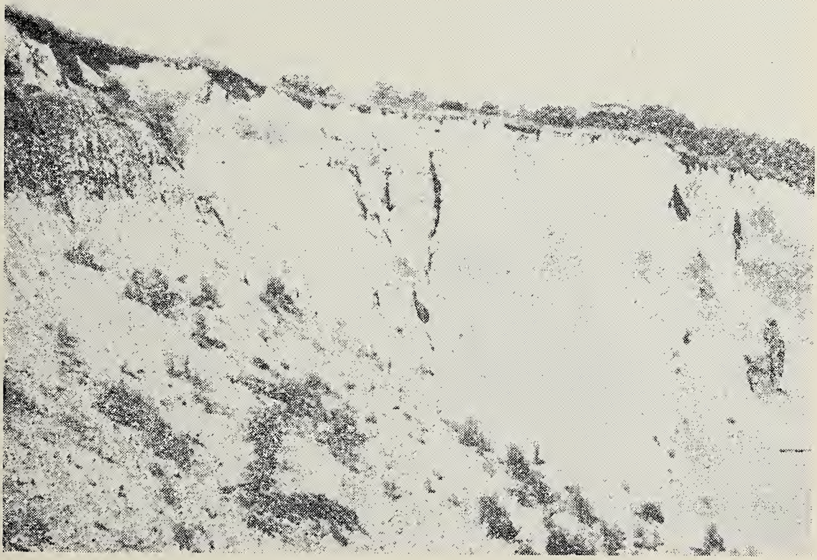


Figure 52 Sand and gravel in pit northwest of Gulph, near Moyer creek

In the succeeding pages the materials, till and stratified drift will be described. There will follow a discussion of the forms that their surfaces make. And finally, the history of the glaciation of the area will be constructed. The map of the glacial deposits (figure 46) summarizes the distribution of deposits.

GLACIAL TILL

Unstratified boulder clay or till underlies a larger area of the surface of the quadrangle than any other single material. In fresh exposures, there is a matrix of very dark gray silty clay with irregularly distributed pebbles, cobbles and boulders, of a great variety of rocks (figure 47). Inasmuch as most of these are different from the solid rock directly underlying them, they have been transported laterally and are known as erratic boulders. Their nature evidences the direction from which the ice moved them. Many are of crystalline rocks, granite, syenite and gneiss such as characterize the surface of the Adirondack mountains and central Ontario. Included are anorthosite and garnet gneiss that must have come from the former area. Another suite is of relatively rare boulders of Lorraine shaly sandstone such as underlies Tug hill, northwest of the quadrangle. These can be distinguished in the presence of distinctive fossils such as are absent in the partially equivalent Frankfort shale of the local area. Boulders of drusy Little Falls dolomite and of the Trenton calcilutites such as are present only in the northeastern part of the region are frequent.

The crystalline boulders reach diameters of as much as 20 feet and some must have a mass of 100 tons or more. The larger are occasionally present on the surface (figure 48); to a degree, they have been concentrated by the removal of finer material from around them, a process resulting in their abundance in the valleys of dissecting streams. They are also heaved by frost and slip slowly down the steeper hillsides; frequently a mound of finer till can be seen immediately below and a crescentic depression above.

Whereas the till is dark gray in dry fresh exposure and almost black when wet, in the fields and within ten or 15 feet of the surface it is brown because of oxidation of the included iron compounds. And though the fresh till is somewhat calcareous, the carbonate has been leached from the upper few feet so as to leave rather acid soils. The thickness of till varies from none or a thin veneer on some of the rock hills to more than 100 feet in some of the lower areas; thick till exposures are particularly numerous along the upper valley of Sterling creek and its tributaries.

STRATIFIED DRIFT

The stratified, water-laid deposits include laminated clays, sands and gravels. The former are present in the bottoms of the valleys both north and south of the Deerfield hills. The latter are prevalent in the area north and east of West Canada creek and along the Mohawk river.

Laminated clay. Laminated clays are widespread in the area but are relatively rarely exposed. Most are truly varved, consisting of beds of one-sixteenth to one-half inch of dark, silty clay, black and gummy when wet, gray and brittle when dry, with partings of coarser, silty texture. They are rarely exposed in the valleys south of the Deerfield hills, being concealed in the bottoms of the ravines by slides of the overlying boulder clay. To the northeast, they can be seen to become interbedded with pebbly laminated clays and sands and with boulder clay. As is the case with the till, their color becomes brown due to oxidation where they approach long exposed surfaces.

South of the Mohawk, they can be seen best along the east-flowing tributary of Moyer creek south of the hill south of Dutch hill, below 1000 feet. Farther north, there are two fine exposures along Sterling creek, one in the north bank of the east branch just above its mouth, about 850 feet and the second along the northwest branch below the bridge at about 900 feet (figure 49) ; each exposes about 15 feet of varved clays with a few pebbly interbeds and exceptional included cobbles. Scores of feet of boulder clay are shown on the slopes above them. They can be seen in many of the tributaries of West Canada creek on each side. One of the most continuous series of exposures through considerable thickness is along the newly graded road that leaves the quadrangle just above West Canada creek north of Harter hill and in the stream to the south. They are well shown in the cut bank of West Canada creek nearby, south of Shedd brook (figure 50), in the ravine across the creek from Poland, in valleys a mile north of Newport, and particularly well beyond the east quadrangle boundary along White creek. They are present to above 800 feet southeast of Hasenclever hill and two miles north-northeast of Ilion and overlie till along Steels creek south of Ilion.

The topographic position along Sterling creek is indicative of the fact that they underlie boulder clay. Farther south, one and one-half miles southeast of Frankfort hill, they are associated with gravels and sands. Along West Canada creek, the relations are better shown because of the fine exposures in cut banks. Across the creek above Middleville, pre-Cambrian syenite is overlain by about 45 feet of stratified cobble gravel with lenses and beds of finer gravel and sand, evidently stream laid (figure 47). Succeeding are varved clays such as are well shown for a thickness of 70 feet below about 775 feet along the road a mile northwest; these are overlain by about 50 feet of boulder clay, then ten feet of laminated sand and more boulder clay to interbedded gravelly sand and silt at the road corner to the west. To the north, in the cut bank south of Shedd brook, the base of the section is concealed but varved clay extends to about 150 feet above the creek, to about 780 feet, with 45 feet of boulder clay, 15 feet of varved clay and 20 of sand overlying (figure 50). East of the creek a mile south of Middleville, boulder clay extends for 90 feet, to about 530 feet and is succeeded by 140 feet of interbedded varved clay, gravel, sand and relatively thin beds of boulder clay (figure 47). In sections farther north, varved clays are overlain by well-sorted sands north of Newport and along White creek to the northeast. Along lower White creek, boulder clay bluffs and those of varved clay and cobbly laminated clay are at similar levels and succeeded by sand but the interrelations of the former are not clearly shown.

There is an area west of Bell hill wherein sandy clays and gravelly silts extend to about 1100 feet and overlie till. They were seen only along the roadside above the highway crossing over Reels creek. Twenty feet of the stratified materials overlie 70 feet of boulder clay having two thin sandy beds 35 and 50 feet above the base of exposure at the stream; they dip westward less than two degrees. Similar deposits may be responsible for the terrace south of the road running eastward from Marcy hill. The western limit of this deposit was not found. Small thicknesses of laminated clays are associated with sands along Nine Mile creek above South Trenton and on the south branch to the road junction two miles southeast of the village. None of these localities has the thickness and continuity of true varved clay shown on Sterling creek, the north branch of Moyer creek or near West Canada creek.

Sand and gravel. There are several kinds of deposits of stratified coarser drift within the area. The most extensive are north and east of West Canada creek, forming the upper parts of the hills, above about 900 feet. They have limited extension southwest of the creek on the tops of hills nearest the stream. The best exposure of these materials is in the Steber gravel pit north of the east-west road one and one-half miles west-northwest of Poland, in a hill rising to 1000 feet. There are well-sorted, cross-laminated sands and gravels exposed for about 60 feet; one large mass of sandy boulder clay is included but the surrounding drift has few particles larger than pebbles. The unconsolidated sediments are cut by a number of small, nearly vertical faults (figure 51). The hills northeast of Newport and Poland are composed of horizontally bedded sands and intercalated gravel. Two miles south of Poland, west of the river, there is a pit in this material; in this hill and others to the north, and southeast to Shedd brook, the sediments lie against the till of the terminal moraine, whereas they overlie varved clays in the hills to the east.

A second area of similar material occupies the elevations below about 850 feet north and west of South Trenton to the margin of the quadrangle. There is a large excavation just north of the quadrangle along the state road to Trenton. The materials form the broad sand terraces north of the Feeder Canal and locally have been redeposited in active sand dunes. There is a small gravel pit on the crest of the terrace southwest of the mouth of Steuben creek and several good sections are shown along Nine Mile creek and its south branch for two miles above South Trenton.

The third large area is that along the Mohawk river across the width of the quadrangle. The materials are of variable texture and form a series of terraces rising to somewhat below 600 feet; though these have a number of pits, good sections are not common. Along the northwest side of Sterling creek, one mile west of Sheaf Corners, a 40-foot bank has cross-laminated sandy gravel to the upper ten feet of poorly-sorted, coarse, cobbly gravel, much like that now forming in the floor of the creek below. This terrace extends north to the road corner and is succeeded by a similar ten-foot terrace, till underlying the adjoining rolling surface at higher elevation, above 560 feet. The large gravel operation on Sterling creek utilizes gravel in the present stream rather than that in the near-by terrace.

Gravels are present on the north side of Moyer creek above Gulph, exposed for fifty feet in a large pit above 1250 feet (figure 52). One twenty-foot bed has long, foreset gravelly beds dipping nearly 40 degrees eastward; the materials are poorly sorted, ranging from coarse gravel to fine silt. The materials underlie the sloping plain from west of Gulph to one mile south of Center, and are well-exposed in the south bank of the stream one and one-half miles southeast of Frankfort hill; the surface of the plain is pitted with small undrained depressions. Several gravel hills extend for a mile southwest of this plain to Black creek and to the east of its northern end along the valley to the east end of Dutch hill.

There are several smaller areas in which sand and gravel are present. There are limited deposits along the banks of many of the streams and particularly in terraces to 100 feet above West Canada creek. Several small sand hills lie north of Nine Mile creek, two miles east of South Trenton at about 900 feet (figure 54).

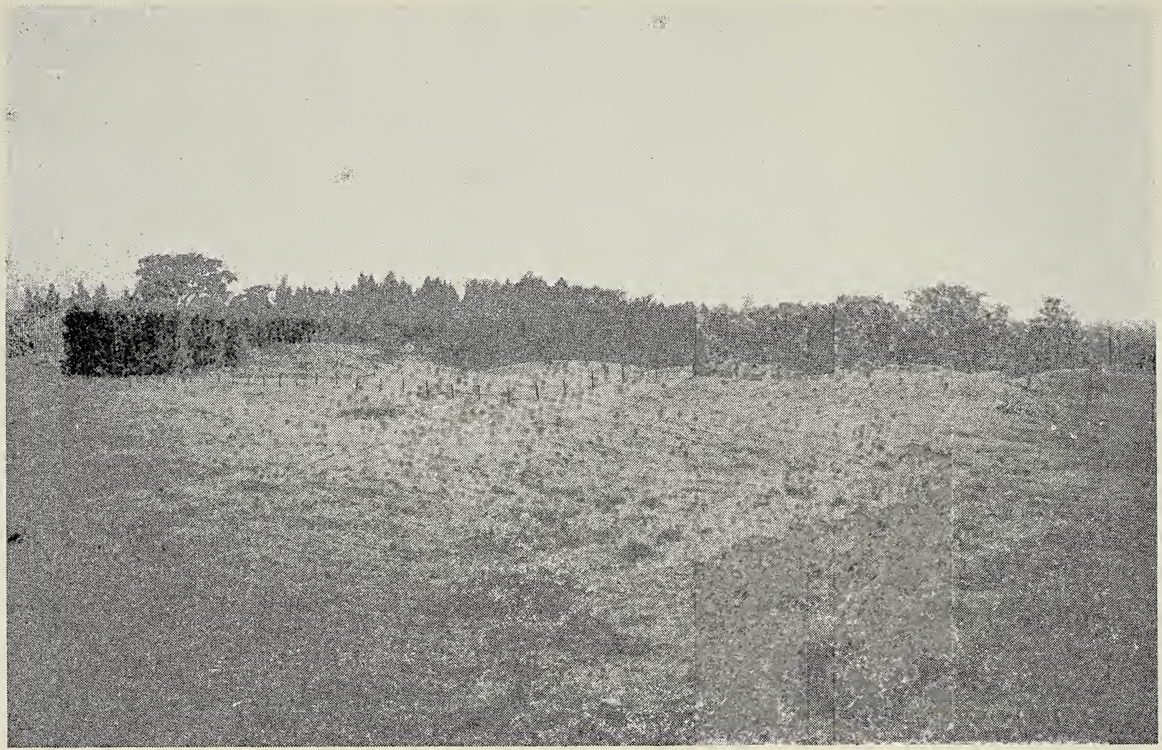


Figure 53 Esker belt two miles south of South Trenton

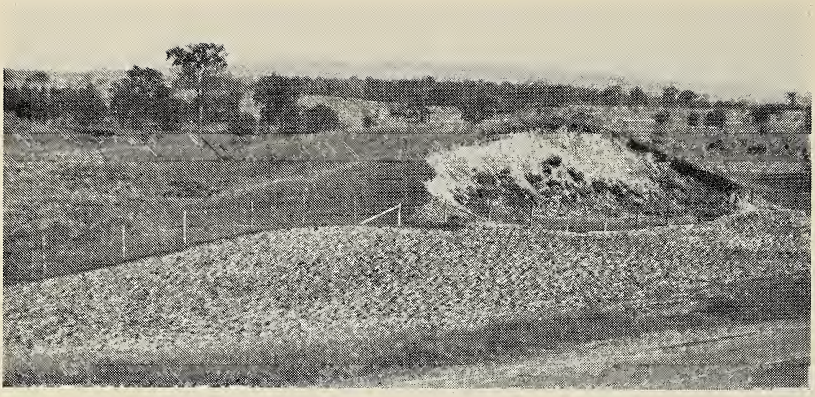


Figure 54 Sand hills on ground moraine two miles east of South Trenton

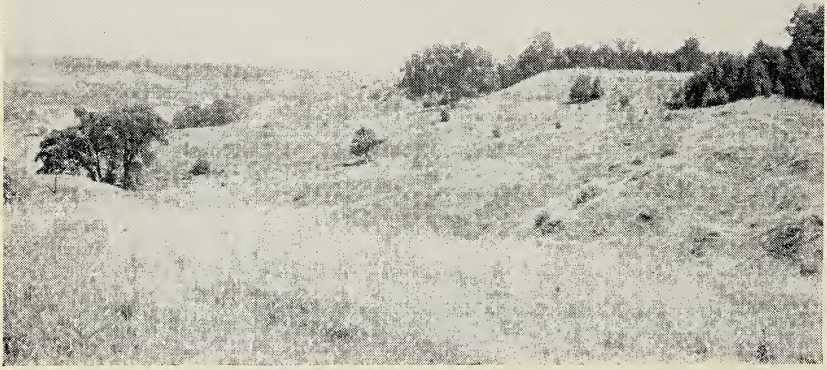


Figure 55 Sand plain at top of west bluff of West Canada creek, overlying varved clay slopes; south of Poland

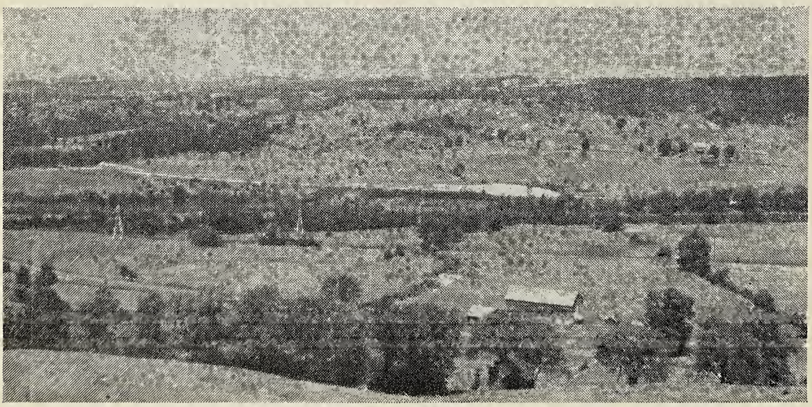


Figure 56 Sand plain at about 1000 feet southeast of Poland; higher plain in distance

SURFACE FORMS

The glacial materials have been discussed. They have characteristic surface forms that evidence their origin. And there are other surface features that reflect erosional history related to glaciation. Ground moraine is most extensive in the area. There are a few eskers on its surface. Terminal moraine is present in a rather narrow but significant belt in the east. There are terraces forming the tops of deposits and others reflecting the erosion by waves and currents of lakes associated with the glaciation.

Ground moraine. Ground moraine forms the gently sloping, broadly convex hills and broad depressions over a large part of the region. The higher elevations are rock hills that have been smooth and normally have a thin veneer of till. The intervening valleys have been deeply filled and now have gently concave, undulating surfaces, cut by the deep ravines of the present streams. The relations can be seen from any of the Deerfield hills or the top of Frankfort hill. The view from the hill rising to 1450 feet (1520 feet on the map) west of Hasenclever hill is particularly advantageous because the rolling moraine is little dissected by tributaries of Sterling creek (figure 41) and can be seen to slope away from the sparsely covered Beech hill.

The ground moraine north of the Mohawk deviates from this pattern in that it tends to have broad terraces in its gently undulating slopes. For example, in ascending the road east of Budlong creek, there is a rather gentle rise above 850 feet, a steeper slope to above 1000 feet, then a gradual slope to 1100 feet and abrupt steepening to 1200 feet. Inasmuch as all but the last is underlain by gently south-dipping Utica shale which has uniform lithology, the terraces can not be structural. That they are not a result of post-glacial erosion or deposition is shown in their being mantled by thin till which retains small undulations such as the small esker that crosses the road at the house at 850 feet. They may reflect terraces cut prior to the advance of the ice, subsequently buried and modified.

Linear ridges of moraine, eskers of a sort, are present at several localities. One-half to two miles east of Martins Corners are several east-trending hills, those on the east having southward spurs. Good sections were not seen but the pattern suggests that they are crevasse fillings. Another belt extends slightly north of east from Deerfield Tavern, at the junction by the stream two miles south of South Trenton, for more than a mile, crossing the road at the house above the bridge over the south branch of Nine Mile creek (figure 53). A linear ridge runs southward along the east side of this road and another along the stream a quarter mile east, joining the main belt at right angle. A third belt of eskers lies along the southeast-trending road one and one-half miles south of the top of Bell hill; trending nearly east, it lies south of the road on the west, to the north on the east. A fourth is north of, and parallel to, the road west of Barkers Corners, extending to Budlong creek; there are several linear, and one somewhat crescentic, hills with small undrained depressions. The contrast in the steep slopes and linear forms of each of these areas with the broad convexity of adjacent ground moraine is apparent. It seems particularly significant that the last belt lies only a little above 600 feet for it is indicative of the fact that if there were high-level lakes in the area after the advance of the glacier, the ice must have remained to cover these relatively delicate features until the waters had receded to low level.

There are a few other small areas of hummocky topography on the ground moraine, as south of Smith hill, just west of Sheaf Corners and one mile east of the mouth of Steuben creek. Several small sand hills along Nine Mile creek, two miles above South Trenton, are in the nature of kames, though on ground moraine. It is a notable feature of the eskers that all have an easterly trend, those in the north a little north of east and those in the south somewhat to the southeast.

Terminal moraine. The terminal moraine is formed at the melting front of the glacier along the line of greatest advance. It is characterized by knobs and intervening swales, sand and gravel hills or kames. It lies between the gently sloping ground moraine and outwash plains of gravel and sand, sometimes pitted with kettles representing blocks of ice buried within the drift. In parts of the area the materials and topography are quite diagnostic, but in others the limit of glacial advance is obscurely evidenced.

Fairchild (1912) colored a belt along the northwest margin of the quadrangle and all the area northeast of West Canada creek as "till and kame" and "kame." In the writer's judgment, the first is dissected stratified delta sand and gravel and the larger, latter area has very few morainal hills. A traverse from upper Shedd brook to north of Newport is illustrative of the relations of the materials and surface forms. On the west is the gently sloping ground moraine of Honey hill, descending to about 1000 feet. Varved clay can be seen to underlie along Shedd brook; in fact, clay is persistently present to elevations about or somewhat above 800 feet from the east margin of the quadrangle to at least a mile northwest of Poland. Along, and east of, lower Shedd brook, the clay is overlain by till forming northwest-trending hills with poorly drained lower areas lying considerably above the deeply cut, narrower valley of the brook. This belt continues northwestward back of the bluff along the creek to a mile south of Poland; the topography is poorly drawn on the map. Facing the creek is a bluff rising to nearly 1000 feet, having varved clay to above 850 feet, directly overlain by sand; and a similar sequence is constant in the bluff on the northeast side of the creek. The sand overlies and buries the till toward the east; and the till seems to pass beneath it at the south, as shown in the cut-bank south of Shedd brook and along the stream and road to the south; at the north, the sand seems to extend to the sloping ground moraine north of Brayton Corners. Clay continues to be present to above 800 feet at least to the north of the abandoned oxbow lake a mile northwest of Poland.

The west end of the ridge road two miles northwest of Poland seems to have kame gravels and sands. To the west, south and southeast to below Terry brook are a number of gravel hills that are suggestive of kames; they are in some cases certainly composed of gravel and sand for there are exposed sections just east of Poland, at the northwest end of the oxbow lake and along the railroad at the edge of the map.

The higher knobs northwest of Poland have, however, exposed varved clay above 800 feet and are dissected remnants of one continuous clay overlain by sand. That they are not terminal moraine is believed because the till seems to overlie varved clay that is persistent on both sides of the creek to about 850 feet and succeeded to 1000 feet by sand that must have formed a plain adjoining the margin of the ice; the valley of West Canada creek must have been cut through this clay and sand plain before the gravels could be laid at the lower level. That the history along the creek has not been one of gradually and regularly declining lake levels is supported by the fact that a sand terrace lies against the valley wall westward from Poland. It is therefore thought that most of the hills within the valley are erosion remnants but that others are of valley gravel laid after the clay-sand plain had been dissected. The large boulders that lie on their surface near the quadrangle boundary may have been let down from once overlying till. But if the conditions are as they seem, the hills are not terminal moraine in the ordinary sense.

The terminus of this lobe of ice that advanced from the west, the Ontarian lobe, is thought to have passed along the east flank of Harter hill; as will be more fully discussed, the hill to the south has well-developed, high-level wave-cut cliffs and benches which seem deeply mantled by till on eastern Harter hill. Till on the west flank of Hasenclever hill has hummocky surface and poorly drained depressions, whereas bedrock lies close to the surface of the main north-south road. It continues west of the crest of the hill more than a mile to the south. Southward, there is little to evidence the terminus of a glacier to the Mohawk river. There are a few suggestive hills a quarter of a mile northwest of the road angle three and one-half miles east of East Schuyler. The gravel hills north of the river from Mohawk to Frankfort have horizontal beds and are thought erosion remnants of a gravel terrace rather than kames. These and similar hills south of Ilion and Mohawk lie below the level of the top of the Mohawk Valley terraces and have branching ridge crests separating the dendritic valleys.

South of the Mohawk, a belt of kames ascends the southeast slope of Dutch hill to Center and there are others in a belt from west of Gulph to where Black creek leaves the southern quadrangle line. An east-sloping outwash plain extends from Center to Black creek and has a number of undrained depressions and small ponds in the kettles; the deposits have been stripped from the bedrock in the valleys but there are sections through them in the pit west of Gulph and in the valley of the stream one and one-half miles north. Knob and swale topography prevails from west of Frankfort hill to Norwich Corners (figure 46) and southward to the quadrangle border; the slopes are not as steep nor is the form of hills as irregular as in typical terminal moraine and the western margin of the belt is not distinct.

In summary, the terminus of the Ontarian glacial lobe is thought to have entered the quadrangle at West Canada creek, followed to the west of the creek from Poland to Shedd brook, passed east of Harter hill, along the west of Hasenclever hill and the hill to the south. It may then have been on the east and south flank of the large hill northeast of Ilion. South of the Mohawk, it is marked by a belt of kames following the southeast slope of Dutch hill and trending southwestward to the mouth of Black creek; along this southern portion, it is margined by an outwash plain on the southeast.

Deposited terraces. The most conspicuous of the depositional terraces are those along the Mohawk, a series of gently sloping, steep-faced surfaces best shown north of the river (figure 57). The top of the upper lies against the less gently, south-sloping, undulating ground moraine, at an elevation of about 560 feet. Similar benches are present east of Utica, south of the river and the city is built on them. Above Frankfort, they merge into the broad, arcuate deltal plain with a very cobbly surface at the mouth of Moyer creek. Farther east, they form a narrow, dissected belt north of the river opposite Frankfort and a broader one south of the river east of the town.

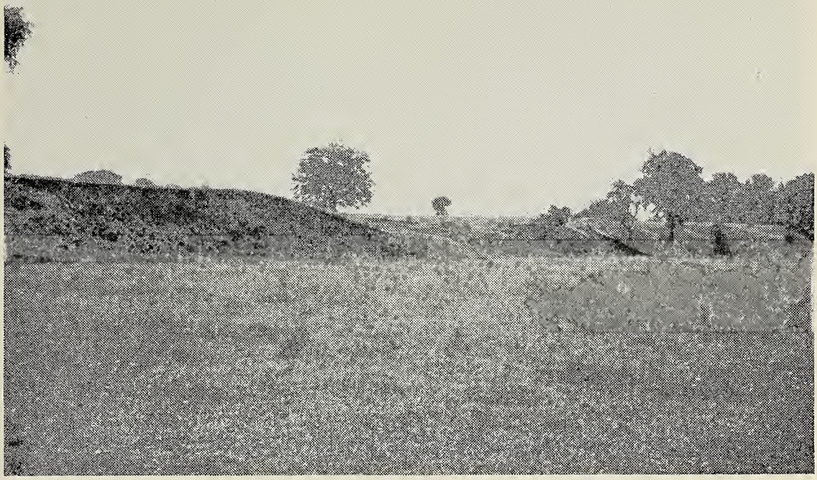


Figure 57 Terrace at about 500 feet north of Mohawk river east of Budlong creek

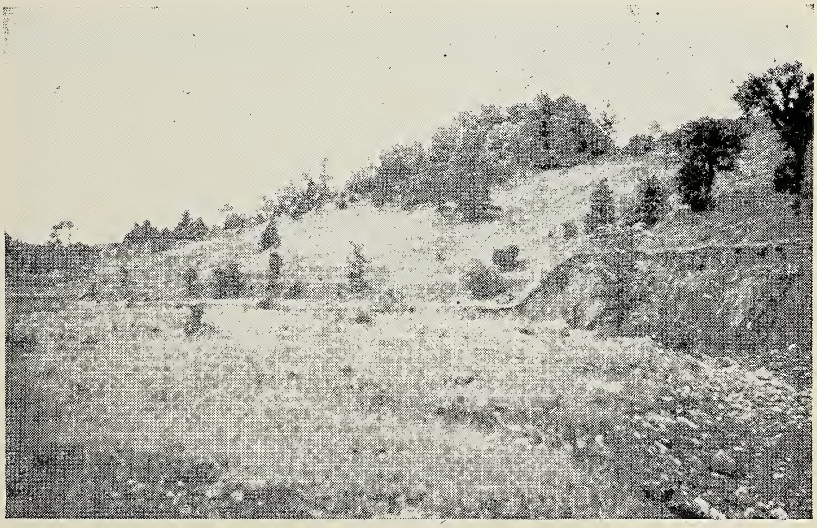


Figure 58 Stream terraces along Sterling creek northeast of Beech hill

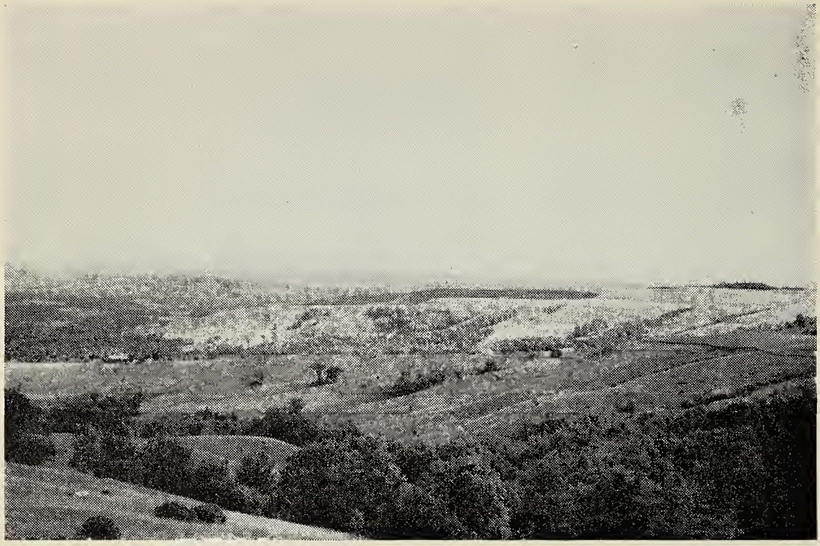


Figure 59 Wave-cut benches and cliffs at about 1260 and 1360 feet; northeast Hasenclever hill

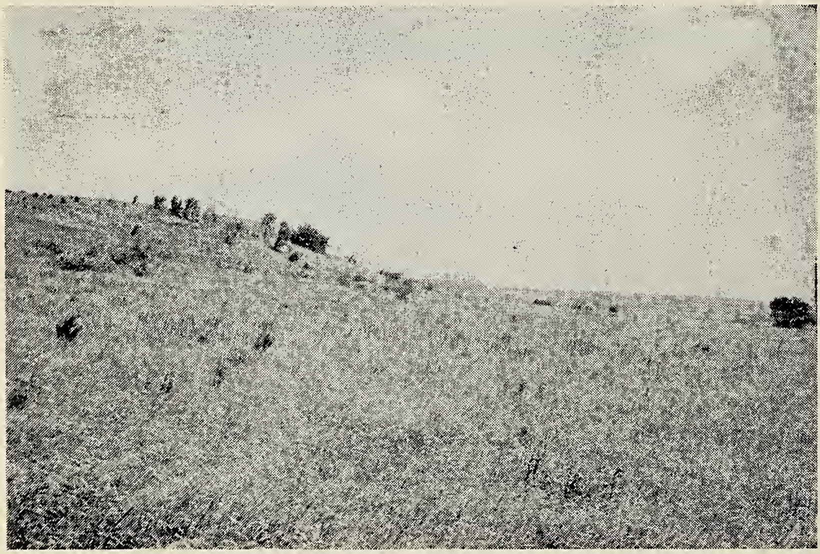


Figure 60 Wave-cut bench and cliff about 1260 feet; hill south of Hasenclever hill with northeast Hasenclever hill in distance

Northeast of the quadrangle are broad sand plains in the vicinity of Gray and Ohio at about 1400 feet, the surface of a delta built southwestward into water standing at about this level and margined on the southwest by the Ontarian ice. Dissected remnants of this surface persist in the extreme northeast of the area. Considerably lower, there are flat areas southeast of Poland (figure 56) and east of Newport and southwest of West Canada creek from Poland to Shedd brook at about 1000 feet (figure 55). These are remnants of a once continuous deltal plain that may have gained part of its material from that above and may be to a degree wave cut. In the northwest, there are terraces or gently sloping plains at several levels below 860 feet that lie on the Ontarian ground moraine which has a steeper, somewhat undulating surface. The most evident of these deltal plains is that two miles northwest of South Trenton on the margin of the area. These evidently entered a receding lake in the valleys of the upper Mohawk river and lower Nine Mile creek, the water perhaps passing over stagnant ice covering the moraine along the Mohawk in the southern part of the map area.

There are small terraces along some of the tributaries of the Mohawk that represent the successive stages in the lowering of their courses (figure 58). Similar gravelly benches are present along the valley of West Canada creek, though the terraces are in part stream planed.

Wave-cut benches. The most conspicuous benches in the quadrangle are two along the east slope of the northeast spur of Hasenclever hill (figure 59) at elevations at the base of their respective cliffs of about 1260 and 1360 feet. The upper has a length of 1200 feet along the axis of the spur, rising but 25 feet to the base of a 40-foot bluff that exposes the contact of the Harter shale member of the Frankfort formation and the Hasenclever sandstone (figure 44). The bench forms an arcuate shelf around the end of this single spur, narrowing laterally. There are few boulders on its surface but many cobbles and pebbles. A good section into the terrace is not displayed but it is cut in the basal Frankfort shale and the bluff of the lower bench has removed any debris that may have spread on the adjoining slopes.

The lower bench is 1700 feet long, terminating in a 75-foot bluff showing bedrock; the shelf drops but five feet in the 500 feet nearest the cliff, steepening to an indefinite termination 65 feet lower. The area is great enough to have several fields. There are numbers of erratic boulders but nothing suggesting a pavement; the slope below has fragments and blocks of shale and sandstone, not stratified, probably representing material cut from the cliff. This terrace, with base of cliff at 1260 feet, continues southward along the east and southeast sides of Hasenclever hill (figure 60) and the northeast, east and southeast slopes of the hill to the south for more than two miles from the first locality described. It continues northward only to the northeast face of the northeast spur. The slope has a number of horizontal nips that may represent short stands of receding waters.

Although there are not comparably preserved, almost flat benches on the hills northwest, there are prominent, more gradual slopes, laterally horizontal and partially drift covered at corresponding elevations. The two southeast spurs of Harter hill are as exposed as that northeast of Hasenclever hill; if the terraces on the latter are wave-formed, as they seem because of their form, and their horizontal extent southward across successively younger beds, there should have been comparable terraces on Harter hill. The surface is till-covered but has gentle slopes at the level of the benches to the south, and much steeper level with the cliffs. The road follows the lower, undulating, till-mantled terrace on the south flank of the north spur. There are comparable terraces on the hills northwest, well shown on that southeast of Martin Corners (figure 61). At the elevation of the lower terrace on Hasenclever hill is a terrace on the east end of this hill having a dip of about three degrees for a breadth of 200 feet; this increases to ten degrees westward and there is a knob of drift that obscures it toward the northwest end of the hill. The slope on the upper terrace is about 15 degrees, in contrast to those of 20 degrees and more between the terraces and above the upper one.

On the north face of Dutch hill is a quite continuous bench with little drift cover, extending for more than a mile, with base of the cliff about 950 feet (figure 62). It has a few scattered erratic boulders on a marshy flat extending for 300 to 400 feet toward the river with shale exposed in ravines below its surface. There is no comparable bench on the more heavily till-mantled west end of the hill, though there is somewhat of a terrace. There is a broad bench at about the same elevation on the southeast face of a spur three and one-half miles east of East Schuyler, north of the Mohawk river.

Thus, in the area east of the terminal moraine of the Ontarian lobe, there are wave-cut benches below 1360 and 1260 feet on northeast Hasenclever hill; the latter extends southward for two miles. There is a comparable bench below 950 feet on the north face of Dutch hill and at similar elevation on the east slope of the hill three and one-half miles east of East Schuyler, each within the supposed area of the Ontarian lobe. Definite terraces at the higher elevations are present on the hills to the northwest of Hasenclever hill but are till mantled.

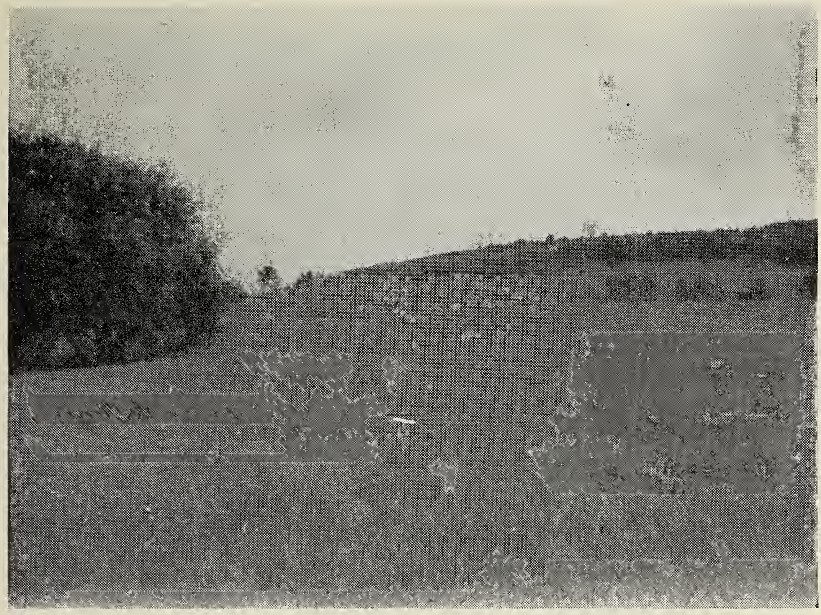


Figure 61 Drift-mantled terrace below 1300 feet; hill east of Martin Corners

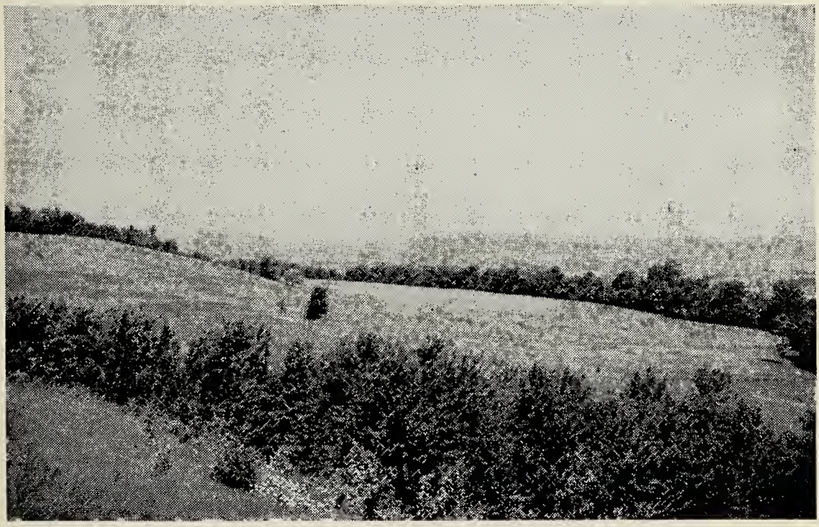


Figure 62 Terrace about 950 feet; northwest Dutch hill

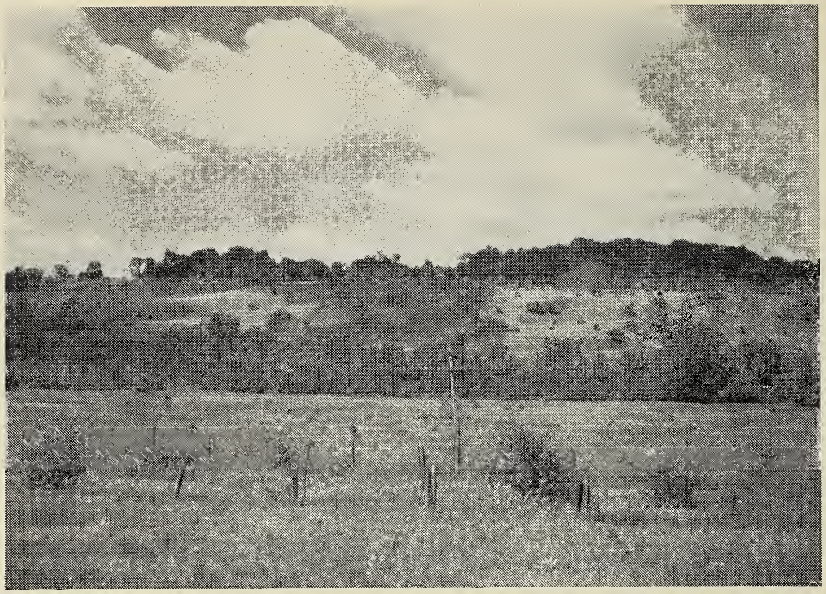


Figure 63 Structural terrace on basal Poland limestone; about 800 feet south of Poland

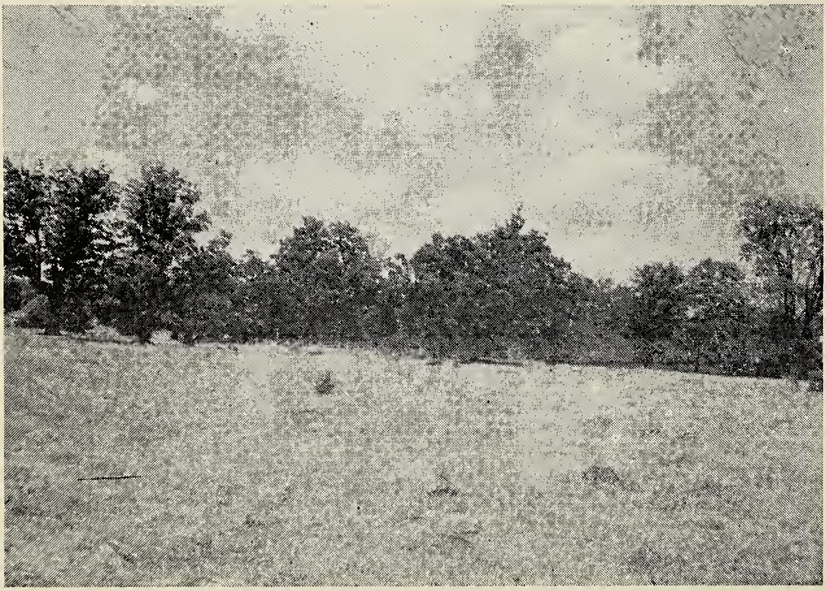


Figure 64 Boulder-littered scoured channel along Erie Feeder canal two miles northwest of South Trenton

Similar concealed benches may be responsible for the shelving of ground moraine at other localities but systematic study has not been undertaken.

Other terraces within the Ontarian lobe, as on Frankfort hill southeast of Utica and the hills to the southeast, are definitely controlled by the presence of resistant Silurian sandstones. The long-continuing terrace below 800 feet along the west side of West Canada creek (figure 63) is on resistant limestone at the base of the Poland member of the Denmark formation; a higher break in slope below 900 feet in the same vicinity is at the contact of sands on more resistant laminated clays. In addition to terraces on plains of deposition, those on resistant rock and those wave-cut or mantled wave-cut, there are stream-cut terraces such as the floors of some of the meander-scars somewhat above the present level of West Canada creek, as south of the bridge northwest of Poland.

Stream channels. At one stage in history, waters flowed through an abandoned valley that is utilized by the Erie Feeder canal west of the mouth of Steuben creek. Fairchild (1912) attributed this channel to east-flowing waters flowing into West Canada creek. This old channel is littered with large glacial boulders (figure 64) and must have reached bedrock at an elevation of about 780 feet west of the state highway. The boulder pavement is the result of the fast-moving water having removed the finer particles of the till that it was competent to carry, leaving a residue of boulders it was unable to transport; similar concentrations characterize the channels of the present streams. The boulder-covered surface extends westward to the curving road a mile west of the highway, to an elevation of a little more than 700 feet; the south face of the terrace to the northwest is steep, suggesting its having been undercut. Similar deltal sands continue southward to Nine Mile creek. Inasmuch as the channel slopes westward, is cut in the middle of a deltal plain, is directed toward the deltas at lower level below Holland Patent and comparable deltas and terraces have not been recognized on West Canada creek below Gravesville, it is the writer's judgment that the waters of upper West Canada creek flowed through this channel to the Mohawk, rather than waters from the west flowing into lower West Canada creek, as Fairchild postulated.

Although there are other small areas having boulder concentrations suggestive of channels, no others have been recognized as of other than local importance. Some may represent surfaces along which water from the melting ice flowed for limited time. The hill west of the road down the north slope of Bell hill is boulder surfaced above about 1250 feet.

PLEISTOCENE HISTORY

The record of the Pleistocene period within the quadrangle is principally of the later part, probably of the Wisconsin stage. Some of the salient features have been discussed by Fairchild (1912) on studies made in surrounding areas. It has been recognized for a long time that the glaciers of the late Pleistocene formed two lobes, the Hudson and Ontarian, extending into the Mohawk valley from the east and northwest; and that glacial lakes formed in the valley with outlets over the divide to the south at several levels. The latter have been summarized by Fairchild who recognized channels at 1360 feet at the head of Otsego creek, southeast of the Utica quadrangle; at 1220 feet at the head of Ilion gulf at Cedarville; at 1260 feet at Cassville, south of Utica and at 1150 feet at the head of Oriskany creek at Bouckville, farther west. There is a col at 1340 feet at Dayville, east of Cassville at the head of Moyer creek that is also suggestive of a channel. It has become known that the present elevation of the glacial lake shores rises gradually northward as a result of crustal tilting so that benches and terraces in the Utica area should be at somewhat higher elevations than the present elevation of corresponding outlet cols.

The interpretation of the history presented in the following pages contrasts somewhat with that previously given. The area is too small to permit analysis of some of the conclusions, and anomalies may require subsequent revision of the story. The interpretation seems to account for the features that have been observed but there may be alternatives required by other evidence in this and adjoining regions that better explain the relations shown in the Utica quadrangle.

Prior to the last glaciation, the area had more rugged topography than at present with bedrock extensively exposed. The present higher rock hills, the Deerfield hills and the Silurian hills on the margin of the Allegheny plateau existed and have been little modified by ice erosion and deposition. But the intervening valleys have been considerably filled and gained broad, gently sloping divides between the narrow, deep-cut ravines of the present streams.

The record of the late Pleistocene Hudson and Ontarian lobes is well recorded but it is probable that the region had been covered completely by earlier ice sheets, the record of which is now concealed or unrecognized. The Hudson lobe spread over the southern part of the quadrangle and probably much of the northern; its western limit is not known for it seems to have been buried by deposits of the Ontarian lobe. There were extensive lakes prior to the greatest advance of this latter ice, for the till overlies varved clays north and south of the Deerfield hills. Along West Canada creek, stream-laid gravels separate the lake clays from bedrock. Thus, as the ice advanced, water levels rose, and clays formed in the bottom of a lake that was bounded by the Hudson lobe on the east, the Adirondack mountains on the north, the Allegheny plateau on the south and the front of the advancing Ontarian ice on the west; the Deerfield hills stood as islands in the lake. The level rose to at least 1360 feet on eastern Hasenclever hill, as shown by the wave-cut bench; at the same time, sand and gravel deltas built into the northern part of the lake from the Adirondack region, forming the plains at about 1400 feet northeast of the area. At this time, the water must have passed into the Susquehanna drainage over a channel at an elevation similar to, or somewhat lower than that of today. It can not have been by Dayville, for there are lower cols both east and west; the divide seems not to have been an important channelway and the gravels along Moyer gulf suggest their having been carried into deeper water to the east. The Otsego outlet seems more probable, in which case the Hudson lobe must have melted eastward to permit the exposure of the outlet. It is not clear why they should not have passed over the Cedarville col, 100 feet lower, unless it retained ice of the Hudson lobe. Possibly the Dayville channel was utilized by water flowing north from remnants of that stagnant ice.

Subsequently, the waters dropped about 100 feet and stood for a long time at this level, the one of the extensively developed wave-cut bench on Hasenclever hill. The Ontarian lobe had not advanced to its terminus for the terraces are covered by its moraine. Probably by this time the Cedarville outlet had been opened by the melting of the Hudson ice. Each of these levels has been considered a phase of Lake Herkimer by Fairchild. During the first stage, the water extended into the Black River drainage basin north of the area. In the second, the two basins were becoming separated and, though they may have been narrowly joined by water at the lower stage, water remained at the level of about 1260 feet in Lake Forestport north of the divide after it receded to the south. There are extensive deltal plains in the vicinity of Forestport that may have been laid while the 1260-foot bench was being cut in the Utica area; and there are smaller areas of plain of this elevation suggested in the sand hills southeast of Poland, though so dissected that their presence can not be stated with confidence.

Levels from below 1200 feet to 900 feet have been attributed by

Fairchild to Lake Schoharie. The 950-foot terrace on the face of Dutch hill is the most definite evidence of this stand. And there are distinct sand plains at, and somewhat below, 1000 feet in the vicinity of Poland and Newport; these may represent surfaces cut in the higher deltal deposits as well as southwestward extensions of those materials. The delta built forward to about the mouth of White creek during this phase. The greatest advance of the Ontarian lobe seems to have been at this time. The terrace on Dutch hill seems to terminate westward at the terminal moraine; it is not clear whether it was buried or ended near to the ice. Masses of boulder clay in the sands and gravels at and below 1000 feet in the Steber pit northwest of Poland suggest that the glacier stood nearby as the gravels were being laid. And, though the sand overlies the marginal moraine, the ice must have stood beyond the ground moraine for that surface and the adjoining inner terminal moraine is at lower level than the lake plain, is not covered by the lake deposits and retains the irregular surface features. South of the Mohawk, the lower edge of the preserved part of the outwash plain is also above 1000 feet. The control of this level has been attributed to outlets freed by the melting of the Hudson lobe to the northeast face of the Helderberg plateau, far east of the Utica area.

With further recession of lake waters, the area of the Ontarian lobe seems to have remained ice covered. The sand hills along Nine Mile creek two miles above South Trenton may represent material carried on the ice from the sand plains to the north and deposited as kames when it melted. The area of lake deposits below 1200 feet near the head of Reels creek may have been laid in an area freed of ice within the Ontarian lobe, dammed by stagnant ice to the southwest. The deltas at successively lower levels in the northeast part of the area were laid in lakes in the upper Mohawk-Nine Mile Creek valleys but the ice seems to have remained south of the Deerfield hills until waters had receded to below 600 feet. Levels below 900 feet have been referred to Lake Amsterdam by Fairchild. The most extensive deposits are below 560 feet along the Mohawk within the quadrangle; there is a large plain at this elevation west of the area below Holland Patent. The great gorge of Trenton falls seems to have developed during the Lake Amsterdam phase, much of the material being carried to deltal plains in the northwest of the area. In earlier stages, the water from Lake Forestport in the upper Black River valley passed over the divide at Remsen to Lake Amsterdam north of South Trenton.

The manner in which, and the time when, the Trenton Falls part of West Canada creek came to drain southeastward are not established.

The lower course may have been developed by waters from the melting Ontarian lobe coursing over the readily dissected deltal plain at the margin. The outlet channel north of South Trenton has bedrock a little below 800 feet so that once sands to the southeast had been cut about 200 feet, the southeast course would have been advantageous. There are sandy terraces south of the creek about 800 feet to opposite Gravesville but evidence for the presence of a lake at this level to the southeast has not been recognized. As has been stated, there are two conspicuous terraces on the hills west of Newport but that about 860 feet is at the contact of sands on laminated clays and that somewhat below 800 feet is a structural bench on resistant bedrock. There are hills of sand and gravel at low elevation in the valley, as those west of the stream one mile south of Newport but they must have formed after the stream had removed the laminated clays to below their base. The southeast course was gained probably after the level of Lake Amsterdam fell to the 560-foot level.

In summary, the area gained wave-cut benches and deltal plains at elevations of about 1360 and 1260 feet in two stages of Lake Herkimer. The Ontarian lobe advanced from the west as the water level receded and reached its terminus at about the time Lake Schoharie stood about 950 feet. With subsequent melting of the ice, a succession of phases of receding Lake Amsterdam formed deltal plains in the northwest and finally extensive terraces along the Mohawk river. West Canada creek reached its present course during this stage. More recently, tributaries have cut their valleys into the glacial deposits and locally have reached bedrock.

Whereas this history is the best that the writer has been able to discern, there are some facts that do not seem satisfactorily explained. Principal among these is the composition of the till in the Ontarian lobe. It is desirable that a quantitative study be made of the composition of this deposit. The ice has been interpreted as advancing from the northwest to a terminus west of West Canada creek. A number of boulders have been seen that are of the fossiliferous Lorraine such as outcrops in the Tug Hill plateau but is unrepresented in the area and thus that seems to have been moved in the requisite course. But on the other hand, many exposures contain abundant boulders of Little Falls dolomite, Rockland limestone, of calcilutite facies of the Denmark limestone of lithology found only in area to the east of the supposed front of the glacier. Though it may be that these have been gained from older underlying till that was carried westward earlier, their abundance seems to make this explanation subject to careful subsequent scrutiny.

ECONOMIC GEOLOGY

INTRODUCTION

A limited amount of iron ore was mined in the area of the Utica quadrangle in the distant past; the quantity never was comparable to that obtained from the district to the west. Quartz that has been gained is of greater interest than value. Building stone has come from several dolomite and limestone formations in the northeast and the sandstones south of the Mohawk. At present, the principal production of limestone is for road metal, concrete aggregate and ballast. Sand and gravel are rather widely distributed and have been removed in considerable quantities. Clay has been utilized locally in the making of brick. Though traces of oil and gas have been encountered, there has not been significant production nor is there promise. Water has been obtained from sands and gravels near the surface; insofar as learned, little has come from deep wells. The greatest resources are the soils that support the agricultural industry, and that are to a degree related to the underlying rock formations.

IRON DEPOSITS

A two-foot bed of oölite hematite ore is persistent at base of the Williamson formation south of the Mohawk. There are other iron-rich calcareous sandstones in the overlying Herkimer formation, no one of which has ever been of importance. In the middle of the last century, several small quarries were opened in the oölitic ore; all are now so overgrown that little can be seen. A small furnace was erected near Gulph, on Moyer creek. The total production is not known, but within the boundaries of the Utica map sheet it was very small. But the district, principally west of the quadrangle, produced 85,000 tons of ore in 1879 and 75,000 tons ten years later (Smock, 1889) ; at the time, it was a relatively important iron-mining region.

QUARTZ

The Little Falls dolomite, with limited exposure in the quadrangle, contains crystals of remarkably clear quartz in geodic cavities. These have been sold in the past as Middleville or Herkimer diamonds to mineral collectors and tourists. Because of the increasing importance of clear quartz in electrical equipment, their presence in abundance could lead to their being of sufficient value to warrant production on a commercial scale. They seem too rare, however, to be promising.

BUILDING STONE

Quarries in two formations have been most important in producing building stone from within the area. The foundations of many of the older buildings in Utica are from quarries in the Oneida formation, exposed south of the city. Similarly, many of the older stone buildings in the valley of West Canada creek are of rock from the Lowville limestone, exposed in the neighborhood of Newport and southeastward in the Little Falls quadrangle. A number of other rocks were quarried. The Cobourg-Steuben limestone was used considerably in the northwestern part of the area but the quarries are principally beyond the map margin; there is a small quarry south of the road near the mouth of Steuben creek. The older Little Falls dolomite was quarried northeast of Poland, the Rockland with the Lowville along the railroad northwest of Newport, and the Sauquoit and Herkimer sandstones at several localities south of the Mohawk river. There were considerable quarries in Devonian limestones just south of the border of the area that produced limestone used in buildings in Utica. And field stone, particularly glacial boulders, has been utilized in many dwellings and foundations.

CRUSHED LIMESTONE

At the present time the quarry northwest of Newport, in the Lowville and Rockland limestones, is the only active producer of crushed rock; it is operated by the Herkimer Quarries Company. The stone is marketed for concrete aggregate, railroad ballast, road metal and the fine grades for agricultural limestone. Both Lowville and Rockland are dense, relatively pure limestones, the latter being a little darker, somewhat cherty and probably a little more siliceous than the former.

There are many smaller quarries that have been opened for road metal for local use. The Lowville and Kirkfield were removed southwest of Newport; the Shoreham, in small quarries north of Shedd brook, a mile north-northeast of Poland and one and one-half miles west of Poland at the road junction; the Poland member of the Denmark, below Brayton Corners; the Rust member of the Cobourg higher on the hill one and one-half miles west of Poland, and just south of the mouth of Steuben creek; and the Steuben member of the Cobourg south of the road at the last locality. An ill-advised endeavor was made to utilize basal Frankfort-Harter shale in a quarry above the road angle eight-tenths of a mile southwest of Harter hill.

There are plentiful supplies of limestone along West Canada creek but little is available to the south within the limits of the quadrangle;

Devonian stone is exposed just south of the area northwest of Dayville. There is relatively little use made of agricultural lime and pulverized limestone on the acid soils, even in areas adjacent to good limestone exposures. And no active lime-kiln was seen.

SAND AND GRAVEL

Deposits of sand and gravel are of varied types and underlie several extensive areas in the region; they are poorly developed in the region of the Deerfield hills. Gravels, sands and silts are interbedded in the most important pits and must be separated. They have been discussed rather fully on preceding pages. In the area north and east of West Canada creek, the largest operation is the Steber pit, one and one-half miles west-northwest of Poland; there are smaller excavations in the sands at the top of the bluff northwest of Poland and that east of Newport; and similar sands have been removed in small pits in corresponding deposits west of Newport and south of Rathbun brook. In the northwestern gravel and sand area, the largest operation is just beyond the edge of the map east of the railroad. There are other pits in sands and gravels at lower elevation in the terraces along West Canada creek, as that a mile south of Newport. In the belt along the Mohawk river, the deposits are at low elevation, below 600 feet. The largest pits are those north of Mohawk and Ilion but there are small openings at many places. The Sterling Creek plant of the Eastern Rock Products Company is in gravels in the present stream. And the last of the principal areas is the belt of kame and outwash gravels extending from Black creek to Center and eastward along the southeast slope of Dutch hill. There are many small gravel pits in addition to the rather large one on the hill crest above Gulph (figure 52).

Sand and gravel may be obtained at most places within each of the principal areas, as shown on the glacial map. Elsewhere, there are limited deposits along the present streams. And though there are several eskers in the region of the Deerfield hills, no one of these has been seen to be composed of stratified and sorted materials.

CLAY

As has been discussed, there are rather extensive deposits of laminated and varved clay, particularly along West Canada creek. But the writer has seen no clay pit within them in the area of the quadrangle; a small one near Middleville to the east was once used in brick-making. The fact that these clays are somewhat calcareous may have limited their utility. River clays have been used in the brick plants near Maynard, to the west of Utica.

OIL AND GAS

Inasmuch as oil and gas have been obtained in rocks like those in the area, the possibilities in the immediate district have been carefully considered. The Trenton limestone is thickly developed in the subsurface in the northwestern half of the quadrangle and is overlain by bituminous and impervious shales of the Utica formation. Moreover, limited quantities of gas and oil have come from wells in Utica and along the Mohawk (Hopper, 1886). These have been short-lived and gas from similar wells to the northwest is so high in sulphur content as to limit its use.

In order that there be favorable possibilities, there should be structures of such form as to concentrate the petroleum products. Most successful New York wells have been in places where the impermeable capping shale is at higher elevation than in the surrounding area. From the survey that has been made, it can be said confidently that there are no structures of sufficient relief to be economically significant; though measurements have not been detailed, no area having structural closure has been discerned. Reversals of the principal southwest dip have been observed and may indicate small areas that would be more favorable than others; some may contain gas but none is promising and any is bound to have limited supply.

WATER RESOURCES

The city of Utica obtains its water principally by an aqueduct running from reservoirs above the Hinckley reservoir along Black creek. Of the consumption of about 13,000,000 gallons a day, (1940) only about 500,000 gallons is from the Grafenburg springs southeast of the city, that in the early days formed the principal source (Hopper, 1886). Frankfort receives water from the watershed of Moyer creek. Newport obtains a supply from springs that issue at the contact of the deltal sands and laminated clays north of the village. Ilion impounds waters of a stream south of the city, a tributary of Steels creek.

The only instance that has been learned of drilling for water at depth was the boring at the south corner of Steuben and South streets in 1856 and 1857, deepening a well put down for coal in 1828 (Hopper, 1886). At 350 feet, the well was abandoned in shale, encountering a "flow of oil and gas." Presumably the well at the Globe Woolen mills (Prosser, 1886) was for water and there may have been others. In any case, there is no known sand that should form a good aquifer at depth unless it be that on the top of the Pre-Cambrian and if one can judge from experience elsewhere, water from such an aquifer should be heavily mineralized. Fortunately, there are considerable reserves in the watersheds of the Adirondacks.

SOILS

Surveys of the soils of Oneida and Herkimer counties have been made and published elsewhere (Maxon etc., 1916; Lewis etc., 1929). The best farms in the region are on the glacial till or on the alluvial plains of the present streams. The sand hills of the northeast and northwest are not successfully cultivated and are used principally for pasture where the forest has been removed; there has been limited reforestation. Some of the higher parts of the Deerfield hills and Dutch hill have bedrock near to the surface and are of limited value. Though erratic boulders are common in the till, they seriously impede cultivation only in limited areas where they have been concentrated by stream scour or along glacial lake beaches. The soils have been developing for sufficient time so that practically all are leached of their lime, even those directly overlying limestone or very calcareous till; hence these acid soils profit by the addition of agricultural lime or pulverized limestone.

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TRILOBITES

1 *Cryptolithus tesselatus* Green, frequent in the Shoreham formation; specimen from top bed along Mill creek, Sacketts harbor, Jefferson county; about twice natural size

2 *Cryptolithus bellulus* (Ulrich), very rare in basal Frankfort Harter shale, from south of Harter hill; about twice natural size

3 and 4 *Calymene senaria* Hall, common in Trenton formations; specimen 3, a head or cephalon, from basal Poland member, Denmark formation, 1 mile south of Russia; specimen 4, thorax and tail or pygidium, same member, Stony creek, south of Middleville; both natural size

5 *Triarthrus eatoni* (Hall), common in Canajoharie and Utica black shales; specimen from Utica, Holland Patent member, South County Home brook; about natural size

CORAL

6 *Columnaria halli* Nicholson, uncommon in Rockland formation, Newport quarry; somewhat reduced in size

CEPHALOPODS

7 *Geisonoceras tenuistriatum* (Hall), very common, usually as internal molds, showing the partitions or sutures, in Denmark formation; specimen from Poland member, Stony creek, south of Middleville; about half size

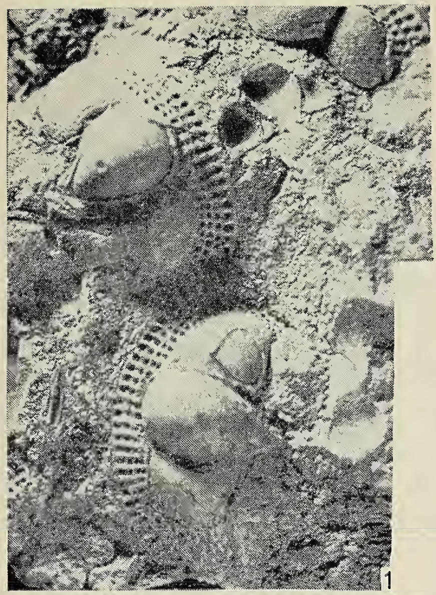
8 *Trocholites ammonius* Conrad, frequent in basal Poland member of Denmark formation; specimen from Shedd brook, south of Newport; about half size

PELECYPOD (CLAM)

9 *Endodesma trentonense* (Hall); frequent in Rockland formation, Newport quarry; specimen showing both valves; about half size

GASTROPOD (SNAIL)

10 *Sinuites cancellatus* Hall; common in Denmark formation; specimen from Poland member above Power house, Trenton Falls gorge; view from side (A) and edge (B), showing coiling in plane; about half size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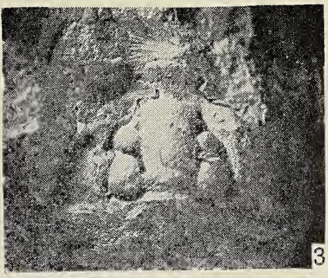
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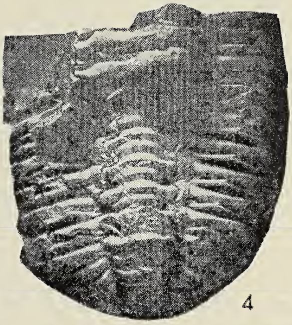
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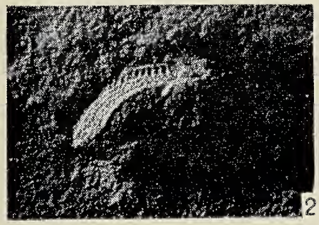
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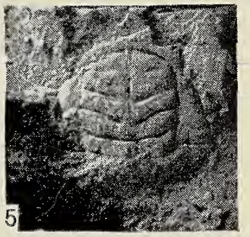
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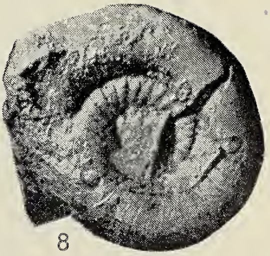
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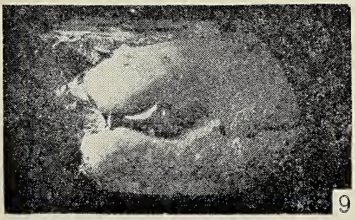
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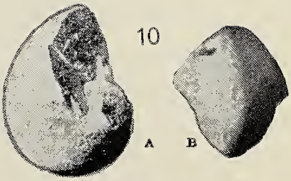
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Figure 65 Fossils from along West Canada creek

BRYOZOANS

11-13 *Prasopora orientalis* Ulrich and related forms; common in Shoreham and Denmark formations; 11, section of very large specimen from Shoreham, Rathbun brook; 12, side view of smaller specimen from Shoreham at junction of highways 8 and 28, west of Poland; 13, part of top of similar specimen from Denmark, County Home creek; each about half size

BRACHIOPODS

14 *Platystrophia trentonensis* McEwan; viewed from brachial side; Shoreham formation, one mile north of Poland; somewhat reduced in size

15 and 17 *Rafinesquina deltoidea* (Conrad); Common in lower Cobourg, North Branch of Moose creek, north of Booneville; about half size

16 *Rafinesquina praecursor* Raymond; Common in basal Denmark formation, Stony creek, south of Middleville; about half size; note contrast with last

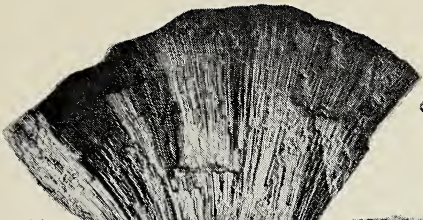
18 *Dalmanella rogata* (Sardeson) (A) and *Sowerbyella punctostriata* (Mather) (B); similar forms common throughout Trenton; specimens from Kirkfield formation, top beds on Rathbun brook, northwest of Newport; about half size

GRAPTOLITES

19 and 20 *Diplograptus amplexicaulis* (Hall); well preserved specimens showing separated cups; frequent in lower Denmark formation; specimens from Gravesville Mill creek and roadside 1 mile south of Russia; about eight times enlarged

21 *Dicranograptus nicholsoni* Hall; filmy specimen reflecting the light; black shale of Canajoharie or Utica, Rathbun brook; about half size

22 *Climacograptus typicalis* (Hall) or variety, same horizon and locality, near head of Rathbun brook; about half size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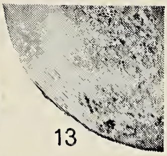
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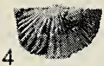
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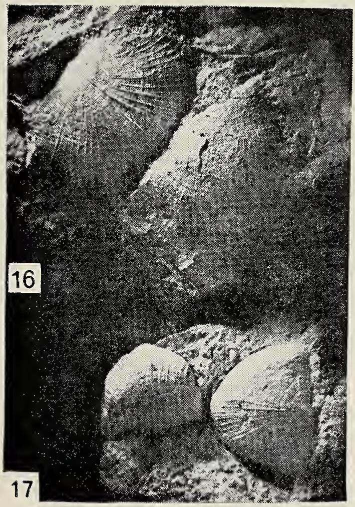
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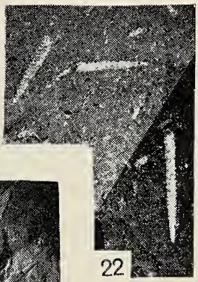
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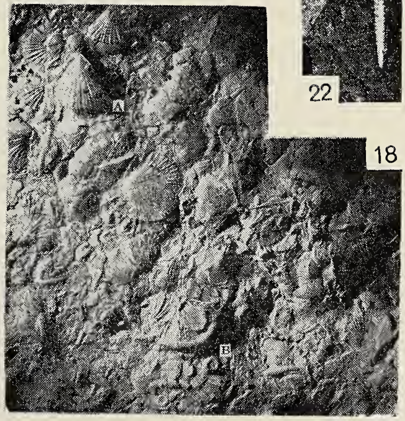

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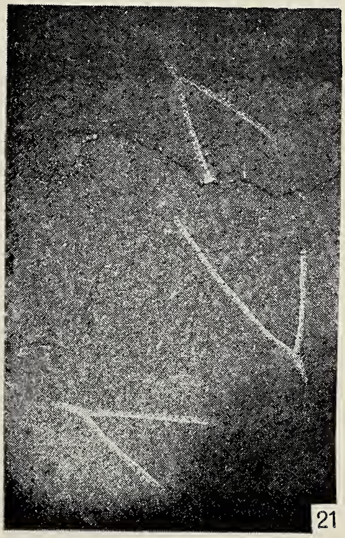
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Figure 66 Fossils from along West Canada creek

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Catalog of Type Specimens of Fossils in the New York State Museum

Supplement 4

By

CLINTON F. KILFOYLE

Curator, Paleontology, New York State Museum

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NEW YORK STATE MUSEUM

BULLETIN NUMBER 348

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CATALOG OF TYPE SPECIMENS OF FOSSILS IN THE NEW YORK STATE MUSEUM SUPPLEMENT 4 BY CLINTON F. KILFOYLE, CURATOR, PALEONTOLOGY

PREFACE

The general classified list, covering 5159 numbers, was published in 1903 as New York State Museum Bulletin 65. Supplement 1, covering numbers 5160 to 5757, was published in 1905 as part of Museum Bulletin 80, Annual Report of the State Paleontologist 1903. Supplement 2, covering numbers 5758 to 6175, was published in 1905 as part of the Annual Report of the Director 1904. Supplement 3, covering numbers 6176 to 6472, was published in 1907 as part of the Annual Report of the Director 1906.

The type specimens listed in this supplement are arranged alphabetically under the various group headings. Each entry is accompanied by the serial number assigned to that specimen. In the general list and in supplements 1, 2 and 3 each entry is accompanied by two numbers, the first serial, the second fractional. Fractional numbers have not been assigned to the specimens listed in this supplement.

LIST OF ABBREVIATIONS

Abh.	Abhandlungen
Abt.	Abtheilung
Acad.	Academy
Adv.	Advancement
Akad.	Akademi, Akademie, Akademiens
Ala.	Alabama
Amazonasgeb.	Amazonasgebietes
Amer.	America, American, Americana
A. M. N. H.	American Museum of Natural History
Ann.	Annales, Annals, Annual
Arch.	Archivos
Ark.	Arkansas
Art.	Article
Assoc.	Association
Bayer.	Bayerischen
bd	band
Beitr.	Beiträge
Biol.	Biological
Böhm.	Böhmische
Brit.	British
Brux.	Bruxelles
Bul.	Bulletin, Bulletins
Cab.	Cabinet
Cam.	Camerata
Camb.	Cambrian
Can.	Canada, Canadian
Can. G. S.	Canadian Geological Survey
Cat.	Catalogue
cf.	confer
cgl.	conglomerate
Chi.	Chicago
Cin.	Cincinnati
Cl.	Classe
co.	county
coll.	collection, collections, collector, collectors
Comp.	Comparative
Conch.	Conchology
Contr.	Contributions
Crin.	Crinoidea
d.	des
dec.	decade
Dept.	Department
Deutsch.	Deutschen
Dev.	Devonian, Devonischen
Dir.	Director
Dist.	District
dol.	dolomite
don.	donor, donors
Dr	Doctor

E.	East
ed.	edition
fig.	figure, figures
form.	formation
Foss.	Fosseis, Fossil, Fossils
Fr.	France
Gen.	Generales
Geol.	Geological, Geologico, Geologie, Geologique, Geologische, Geologischen, Geologisk, Geologist, Geology.
Gesell.	Gesellschaft
Gov.	Governor
gr.	group
Grapt.	Graptolites
Gründz.	Gründzuge
G. S.	Geological Survey
G. S. A.	Geological Society of America
H.	Heft
Handl.	Handlingar
Hist.	History
Ill.	Illinois
Illust.	Illustrations
Ind.	Indiana
indet.	indeterminate
Inst.	Institute
isl.	island, islands
Jahr.	Jahrbuch
Jour.	Journal
Kgl.	Kongliga, Königlich
Kl.	Klasse
Ky.	Kentucky
Lab.	Laboratories
Landes.	Landesanstalt
Low.	Lower
ls.	limestone
Mag.	Magazine
Mass.	Massachusetts
Mat.	Mathematische
Matem.	Matematisk
Md.	Maryland
Me.	Maine
Mem.	Memoir, Memoirs, Mémoires
Mich.	Michigan
Mid.	Middle
Midl.	Midland
Min.	Mineralogico, Mineralogie
Minn.	Minnesota
Misc.	Miscellaneous
Mo.	Missouri
Mon.	Monograph, Monographias
ms.	manuscript
Mt	Mount

mt.	mountain
mts	mountains
Mus.	Museu, Museum
mut.	mutation
N. A.	North America, North American
Nac.	Nacional
Nat.	National, Natural, Naturalist, Naturwissenschaftliche
Naturf.	Naturforschenden
Naturvid.	Naturvidenskapelig
N. B.	New Brunswick
Nebr.	Nebraska
n. f.	neue folge
Nfld	Newfoundland
N. H.	Natural History
N. J.	New Jersey
no.	number
nom. nud.	nomen nudum
n.s.	new series
n. sp.	new species
N. Y.	New York
N. Y. G. S.	New York Geological Survey
N. Y. S.	New York State
N. Y. S. M.	New York State Museum
Okla.	Oklahoma
Ont.	Ontario
Ord.	Ordovician
p.	page
P.	Paper
Pa.	Pennsylvania
Pal.	Palaontologie, Paleontology
Palaeocr.	Palaeocrinoidea
Palaeontogr.	Palaeontographica
Paleo.	Paleozoic, Paleozoicos
Phila.	Philadelphia
Philos.	Philosophical
Phys.	Physiques
pl.	plate
P. Q.	Province of Quebec
Pr.	Proceedings
Preuss.	Preussen, Preussischen
Prof.	Professor
Prog.	Progress
pt	part
Pub.	Publication
publ.	published
qtze	quartzite
Quart.	Quarterly
Que.	Quebec
Rec.	Records
Rep't	Report, Reports
Res.	Resources

Rev.	Revision
Rhein.	Rheinischen
Roy.	Royal
S.	South
Schiefergeb.	Schiefergebirge
Sci.	Science, Sciences, Scientific
Scot.	Scottish
sect.	section
Senckenb.	Senckenbergischen
ser.	série, series
Serv.	Servico
sh.	shale
Sil.	Silurian
Sitz.	Sitzungsberichte
Skr.	Skrifter
Smithson.	Smithsonian
S. M. N. H.	State Museum of Natural History
Soc.	Société, Society
sp.	species
Spec. P.	Special Paper
Spec. Pub.	Special Publication
ss.	sandstone
St	Saint
Supt.	Superintendent
Surv.	Survey
Syst.	System
t.	tome
Tenn.	Tennessee
Thüring.	Thüringeschen
Tids.	Tidsskrift
Tr.	Transactions
twp	township
u.	und
Univ.	University
Unt.	Unteren
Up.	Upper
U. S. G. S.	United States Geological Survey
U. S. N. M.	United States National Museum
U. S. S. R.	Union of Soviet Socialist Republics
v.	volume
var.	variety
Verstein.	Versteinischen
Vet.	Vetenskaps
Vid.	Videnskaps
Wash.	Washington
West.	Western
Wis.	Wisconsin
Wiss.	Wissenschaften
wl.	waterlime
W. Va.	West Virginia
Zeitschr.	Zeitschrift
Zool.	Zoology

PLANTAE

ARCHAEOPTERIS Dawson

Archaeopteris jacksoni (Dawson)

6473 HYPOTYPE *Cyclopteris jacksoni* Dawson. Can. Nat. 1861. v. 6, no. 3, p. 172.
Archaeopteris jacksoni Prosser. N. Y. S. Geol., Ann. Rep't 17. 1899. p. 119, pl. 3.
Oneonta ss. Between Franklin and Otego, N. Y.

ARCHAEOSIGILLARIA Kidston

Archaeosigillaria primaeva (Rogers)

6474 HYPOTYPE *Lepidodendron primaevum* Rogers. Geol. Pa. 1858. v. 2, pt 2, p. 828.
Archaeosigillaria primaeva White. N. Y. S. M. Bul. 107. 1907. p. 327, pl. 1-11.
Hatch sh. Naples, N. Y.
D. D. Luther & J. M. Clarke, coll. 1887

BARINOPHYTON D. White

Barinophyton citrulliforme Arnold

6475 COTYPE *Barinophyton citrulliforme* Arnold. Mich. Univ., Mus. Pal., Contr. 1939. v. 5, no. 11, p. 285, pl. 4, fig. 1.
Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 19A (C).
Cattaraugus (Conewango) beds
Near Olean "Rock City," Cattaraugus co. N. Y.
J. G. Woodruff, coll. & don. 1934

6476 COTYPE Arnold. Mich. Univ., Mus. Pal., Contr. 1939. v. 5, no. 11, pl. 4, fig. 2.
Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 19A (C).
Cattaraugus (Conewango) beds
Near Olean "Rock City," Cattaraugus co. N. Y.
J. G. Woodruff, coll. & don. 1934

6477 COTYPE Arnold. Mich. Univ., Mus. Pal., Contr. 1939. v. 5, no. 11, pl. 4, fig. 3, 5.
Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 19A (C).
Cattaraugus (Conewango) beds
Near Olean "Rock City," Cattaraugus co. N. Y.
J. G. Woodruff, coll. & don. 1934

APR 16 [illegible]

6478 cotype Arnold. Mich. Univ., Mus. Pal., Contr. 1939. v. 5, no. 11, pl. 4, fig. 4.
Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 19A (C).
Cattaraugus (Conewango) beds
Near Olean "Rock City," Cattaraugus co. N. Y.
J. G. Woodruff, coll. & don. 1934

Buthotrephis grantii see (under Graptozoa) **Thallograptus granti**

Buthotrephis lesquereuxi see (under Graptozoa) **Thallograptus lesquereuxi**

CALLITHAMNOPSIS Whitfield

Callithamnopsis delicatula Ruedemann

6479 cotype *Callithamnopsis delicatula* Ruedemann. N. Y. S. M. Bul. 133. 1909. p. 203, pl. 1, fig. 5.
Glens Falls ls. Glens Falls, N. Y.

6480 cotype Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 2, fig. 1.
Glens Falls ls. Glens Falls, N. Y.

6481 cotype Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 2, fig. 2.
Glens Falls ls. Glens Falls, N. Y.

Callithamnopsis silurica Ruedemann

6482 holotype *Callithamnopsis silurica* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 15; p. 15, fig. 2; pl. 4, fig. 4.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

CALLIXYLON Zalessky

Callixylon sp.

6483 hypotype *Callixylon* sp. Arnold. Mich. Acad. Sci., Arts and Letters, Papers. 1929. publ. 1930. 11:23, pl. 8, fig. 2.
Genundewa ls. Bristol, N. Y.
The thin section figured is in the possession of the Univ. Mich. The remainder of the type specimen is in the N. Y. S. M.

Callixylon erianum Arnold

6484 HOLOTYPE *Callixylon erianum* Arnold. Mich. Acad. Sci., Arts and Letters, Papers. 1929. publ. 1930. 11:18, pl. 10, fig. 1, 2; pl. 11, fig. 1, 2; pl. 12, fig. 1, 2; pl. 13, fig. 1-3; pl. 17, fig. 1, 2.
Genesee sh. South Wales, Erie co. N. Y.
I. P. Bishop, coll. 1906

The thin sections figured are in the possession of the Univ. Mich. The remainder of the type specimen is in the N. Y. S. M.

Callixylon zalesskyi Arnold

6485 PARATYPE (cited specimen) *Callixylon zalesskyi* Arnold. Mich. Acad. Sci., Arts and Letters, Papers 1929. publ. 1930. 11:17.
Genundewa ls. Bristol Center, N. Y.

CHAETOCLADUS Whitfield

Chaetocladus sardesoni Ruedemann

6486 COTYPE *Chaetocladus sardesoni* Ruedemann. N. Y. S. M. Bul. 133. 1909. p. 204, pl. 2, fig. 3.
Platteville ls. Minneapolis, Minn.

On slab with types of *Chaetocladus sardesoni,* pl. 2, fig. 4-11.

6487 COTYPE Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 2, fig. 4, 11?
Platteville ls. Minneapolis, Minn.

On slab with types of *Chaetocladus sardesoni,* pl. 2, fig. 3, 5-10.

6488 COTYPE Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 2, fig. 5, 10?
Platteville ls. Minneapolis, Minn.

On slab with types of *Chaetocladus sardesoni,* pl. 2, fig. 3, 4, 6-9, 11.

6489 COTYPE Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 2, fig. 6, 8?
Platteville ls. Minneapolis, Minn.

On slab with types of *Chaetocladus sardesoni,* pl. 2, fig. 3-5, 7, 9-11.

6490 COTYPE Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 2, fig. 7, 9?
Platteville ls. Minneapolis, Minn.
On slab with types of *Chaetocladus sardesoni,* pl. 2, fig. 3-6, 8, 10, 11.

CHONDRITES Sternberg

Chondrites graminiformis see (under Graptozoa)
Medusaegraptus graminiformis

Chondrites verus Ruedemann

6491 HOLOTYPE (original & counterpart) *Chondrites verus* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 15, pl. 4, fig. 5.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard. coll.

COREMATOCLADUS Ruedemann

Corematocladus densa Ruedemann

6492 COTYPE *Corematocladus densa* Ruedemann. N. Y. S. M. Bul. 133. 1909. p. 206, pl. 3, fig. 1, 4.
Glens Falls ls. Glens Falls, N. Y.
R. Ruedemann & J. Van Deloo, coll.

6493 COTYPE Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 3, fig. 2.
Glens Falls ls. Glens Falls, N. Y.
R. Ruedemann & J. Van Deloo, coll.

6494 COTYPE Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 3, fig. 3.
Glens Falls ls. Glens Falls, N. Y.
R. Ruedemann & J. Van Deloo, coll.

6495 COTYPE Ruedemann. N. Y. S. M. Bul. 133. 1909. pl. 3, fig. 5.
Glens Falls ls. Glens Falls, N. Y.
R. Ruedemann & J. Van Deloo, coll.

CRYPTOZOÖN Hall

Cryptozoön proliferum Hall

6496 HYPOTYPE *Cryptozoön proliferum* Hall. N. Y. S. M., Ann. Rep't 36. 1883. Explanation of plate 6.
Goldring. N. Y. S. M. Bul. 315. 1938. p. 32; p. 29, fig. 11 (front).
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6497 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 29, fig. 11 (left center).
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6498 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 29, fig. 11. (right center).
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6499 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 29, fig. 11 (left).
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6500 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 29. fig. 11 (right).
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6501 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 33, fig. 12A.
Hoyt ls. Greenfield, Saratoga co. N. Y.

6502 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 33, fig. 12B, 12C.
Hoyt ls. Greenfield, Saratoga co. N. Y.

6503 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 34, fig. 13A.
Hoyt ls. Greenfield, Saratoga co. N. Y.

6504 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 34, fig. 13B.
Hoyt ls.
Lester park, 2½ miles west of Saratoga Springs, N. Y.

6505 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 37, fig. 14A.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.
On thin section with type of *Cryptozoön proliferum*, p. 37, fig. 14B.

6506 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 37, fig. 14B.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.
On thin section with type of *Cryptozoön proliferum*, p. 37, fig. 14A.

6507 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 37, fig. 14C.
Hoyt ls.
Ritchie park 2¼ miles west of Saratoga Springs, N. Y.

6508 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 37. fig. 14D.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6509 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 38, fig. 15A.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

Cryptozoön ruedemanni Rothpletz

6510 HYPOTYPE *Cryptozoön ruedemanni* Rothpletz. Bayer. Akad. Wiss., Abh. 1916. v. 28, no. 4, p. 36.
Goldring. N. Y. S. M. Bul. 315. 1938. p. 36; p. 38, fig. 15B.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.
On thin section slide with type of *Cryptozoön ruedemanni*, p. 41, fig. 18B.

6511 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 41, fig. 18A.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6512 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 41, fig. 18B.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.
On thin section slide with type of *Cryptozoön ruedemanni,* p. 38, fig. 15B.

6513 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 41, fig. 18C.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

Cryptozoön undulatum Bassler

6514 HYPOTYPE *Cryptozoön undulatum* Bassler. Md. Geol. Surv., Camb. and Ord. 1919. p. 190.
Goldring. N. Y. S. M. Bul. 315. 1938. p. 43; p. 47, fig. 21A, 21B.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6515 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 48, fig. 22A.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6516 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 48, fig. 22B.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

6517 HYPOTYPE Goldring. N. Y. S. M. Bul. 315. 1938. p. 48, fig. 22C.
Hoyt ls.
Ritchie park, 2¼ miles west of Saratoga Springs, N. Y.

Cyclopteris jacksoni see **Archaeopteris jacksoni**

DELESSERELLA Ruedemann

Delesserella salicifolia (Ruedemann)

6518 HOLOTYPE *Delesserites salicifolia* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 8, pl. 1, fig. 2.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Delesserites salicifolia see **Delesserella salicifolia**

EOSPERMATOPTERIS Goldring

Eospermatopteris sp.

6519 TYPE (original & counterpart) *Eospermatopteris* sp. Goldring. N. Y. S. M. Bul. 251. 1924. p. 55; p. 60, fig. 2.
Hamilton (Moscow) beds Gilboa, N. Y.

6520 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 8.
Hamilton (Moscow) beds Gilboa, N. Y.

6521 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. p. 61, fig. 3.
Hamilton (Moscow) beds Gilboa, N. Y.

6522 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 9.
Hamilton (Moscow) beds Gilboa, N. Y.

6523 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. p. 62, fig. 4.
Hamilton (Moscow) beds Gilboa, N. Y.

6524 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. p. 65, fig. 6.
Hamilton (Moscow) beds Gilboa, N. Y.

6525 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 1.
Hamilton (Moscow) beds Gilboa, N. Y.

6526 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 2.
Hamilton (Moscow) beds Gilboa, N. Y.

6527 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 3.
Hamilton (Moscow) beds Gilboa, N. Y.

6528 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 4.
Hamilton (Moscow) beds Gilboa, N. Y.

6529 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 5.
Hamilton (Moscow) beds Gilboa, N. Y.
On slab with type of *Eospermatopteris* sp., pl. 11, fig. 2.

6530 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 6.
Hamilton (Moscow) beds Gilboa, N. Y.

6531 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 7.
Hamilton (Moscow) beds Gilboa, N. Y.

6532 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 8.
Hamilton (Moscow) beds Gilboa, N. Y.

6533 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 9.
Hamilton (Moscow) beds Gilboa, N. Y.
On slab with type of *Eospermatopteris* sp., pl. 11, fig. 3.

6534 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 10.
Hamilton (Moscow) beds Gilboa, N. Y.

6535 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 11.
Hamilton (Moscow) beds Gilboa, N. Y.

6536 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 10, fig. 12.
Hamilton (Moscow) beds Gilboa, N. Y.
On slab with type of *Eospermatopteris* sp., pl. 11, fig. 1.

6537 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 1.
Hamilton (Moscow) beds Gilboa, N. Y.
On slab with type of *Eospermatopteris* sp., pl. 10, fig. 12.

6538 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 2.
Hamilton (Moscow) beds Gilboa, N. Y.
On slab with type of *Eospermatopteris* sp., pl. 10, fig. 5.

6539 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 3.
Hamilton (Moscow) beds Gilboa, N. Y.
On slab with type of *Eospermatopteris* sp., pl. 10, fig. 9.

6540 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 4.
Hamilton (Moscow) beds Gilboa, N. Y.

6541 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 5.
Hamilton (Moscow) beds Gilboa, N. Y.

6542 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 6.
Hamilton (Moscow) beds Gilboa, N. Y.

6543 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 7.
Hamilton (Moscow) beds Gilboa, N. Y.

6544 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 8.
Hamilton (Moscow) beds Gilboa, N. Y.
On slab with type of *Eospermatopteris* sp., pl. 11, fig. 10.

6545 TYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 9.
Hamilton (Moscow) beds Gilboa, N. Y.

6546 TYPE (original & counterpart) Goldring. N. Y. S. M. Bul. 251. 1924. pl. 11, fig. 10.
Hamilton (Moscow) beds Gilboa, N. Y.
On slab with type of *Eospermatopteris* sp., pl. 11, fig. 8.

6547 TYPE *Eospermatopteris* Goldring. N. Y. S. M. Bul. 267. 1926. p. 85; plate facing p. 85.
Hamilton (Moscow) beds Gilboa, N. Y.

6548 TYPE Goldring. N. Y. S. M. Bul. 267. 1926. 1st plate following p. 86.
Hamilton (Moscow) beds Gilboa, N. Y.

6549 TYPE Goldring. N. Y. S. M. Bul. 267. 1926. 2d plate following p. 86.
Hamilton (Moscow) beds Gilboa, N. Y.

Eospermatopteris erianus (Dawson)

6550 NEOHOLOTYPE *Psaronius erianus* Dawson. Can. G. S., Can. Foss. Plants. 1871. p. 58 (no figures).
Clarke. Sci. Monthly. 1921. v. 12, no. 1, fig. p. 86; low. fig. p. 88 (figured without name or description).
Eospermatopteris erianus Goldring. N. Y. S. M. Bul. 251. 1924. p. 68, pl. 7 (figured and described).
Hamilton (Moscow) beds Gilboa, N. Y.

Eospermatopteris textilis (Dawson)

6551 COTYPE *Psaronius textilis* Dawson. Can. G. S., Can. Foss. Plants. 1871. p. 59 (no figures).
Hamilton (Moscow) beds Gilboa, N. Y.

6552 COTYPE Dawson. Can. G. S., Can. Foss. Plants. 1871. p. 59 (no figures).
Hamilton (Moscow) beds Gilboa, N. Y.

6553 COTYPE Dawson. Can. G. S., Can. Foss. Plants. 1871. p. 59 (no figures).
Hamilton (Moscow) beds Gilboa, N. Y.

6554 COTYPE Dawson. Can. G. S., Can. Foss. Plants. 1871. p. 59 (no figures).
Clarke. Sci. Monthly. 1921. v. 12, no. 1, 2d specimen from left on p. 90 (figured without name or description).
Hamilton (Moscow) beds Gilboa, N. Y.

6555 COTYPE Dawson. Can. G. S., Can. Foss. Plants. 1871. p. 59 (no figures).
Clarke. Sci. Monthly. 1921. v. 12, no. 1, 5th specimen from left on p. 90 (figured without name or description).
Hamilton (Moscow) beds Gilboa, N. Y.

6556 COTYPE Dawson. Can. G. S., Can. Foss. Plants. 1871. p. 59 (no figures).
Clarke. Sci. Monthly. 1921. v. 12, no. 1, low. fig. on p. 84 (figured without name or description).
Hamilton (Moscow) beds Gilboa, N. Y.

6557 HYPOTYPE Clarke. Sci. Monthly. 1921. v. 12, no. 1, 3d specimen from left on p. 90 (figured without name or description).
Hamilton (Moscow) beds Gilboa, N. Y.

6558 HYPOTYPE Clarke. Sci. Monthly. 1921. v. 12, no. 1, up. fig. on p. 88 (figured without name or description).
Eospermatopteris textilis Goldring. N. Y. S. M. Bul. 251. 1924. p. 68, pl. 5 (figured and described).
Hamilton (Moscow) beds Gilboa, N. Y.

6559 HYPOTYPE *Eospermatopteris textilis* Goldring. N. Y. S. M. Bul. 251. 1924. pl. 2 (figured and described).
Hamilton (Moscow) beds Gilboa, N. Y.

6560 HYPOTYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 3 (figured and described).
Hamilton (Moscow) beds Gilboa, N. Y.

6561 HYPOTYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 4 (figured and described).
Hamilton (Moscow) beds Gilboa, N. Y.

6562 HYPOTYPE Goldring. N. Y. S. M. Bul. 251. 1924. pl. 6 (figured and described).
Hamilton (Moscow) beds Gilboa, N. Y.

6563 HYPOTYPE Goldring. N. Y. S. M. Bul. 251. 1924. p. 58, (not figured).
Hamilton (Moscow) beds Gilboa, N. Y.

HOSTIMELLA Potonie & Bernard

Hostimella silurica Goldring

6564 HOLOTYPE *Hostimella silurica* Goldring (in Ruedemann). N. Y. S. M. Bul. 265. 1925. p. 17, pl. 5, fig. 2.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

6565 PARATYPE Goldring (in Ruedemann). N. Y. S. M. Bul. 265. 1925. pl. 5, fig. 1.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Lepidodendron primaevum see **Archaeosigillaria primaeva**

MORANIA Walcott

Morania (?) bertiensis Ruedemann

6567 HOLOTYPE *Morania (?) bertiensis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 16, pl. 4, fig. 1.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll

Protolepidodendron see **Sigillaria** or **Protolepidodendron**
Psaronius erianus see **Eospermatopteris erianus**
Psaronius textilis see **Eospermatopteris textilis**

RHOMBODICTYON Whitfield

Rhombodictyon irregulare Ruedemann

6568 HOLOTYPE *Rhombodictyon irregulare* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 11; p. 12, fig. 3.
Utica sh. Holland Patent, N. Y.
R. Ruedemann, coll.

6569 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 12, fig. 2.
Utica sh. Holland Patent, N. Y.
R. Ruedemann, coll.

SCHODACKIA Ruedemann

Schodackia biserialis Ruedemann

6570 HOLOTYPE *Schodackia biserialis* Ruedemann. N. Y. S. M. Bul. 327. 1942. p. 21, fig. 5 (3,4).
Schodack shaly ls. Becraft Mt., Hudson, N. Y.
R. Ruedemann & T. Y. Wilson, coll. 1934

6571 PARATYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 5 (5).
Schodack shaly ls. Becraft Mt., Hudson, N. Y.
R. Ruedemann & T. Y. Wilson, coll. 1934
On slab with type of *Schodackia biserialis,* fig. 5 (6).

6572 PARATYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 5 (6).
Schodack shaly ls. Becraft Mt., Hudson, N. Y.
R. Ruedemann & T. Y. Wilson, coll. 1934
On slab with type of *Schodackia biserialis,* fig. 5 (5).

6573 PARATYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 5 (7).
Schodack shaly ls. Becraft Mt., Hudson, N. Y.
R. Ruedemann & T. Y. Wilson, coll. 1934

SIGILLARIA BRONGNIART

Sigillaria or **Protolepidodendron**

6574 HYPOTYPE *Sigillaria* or *Protolepidodendron* Goldring. N. Y. S. M. Bul. 267. 1926. p. 86; 3d plate following p. 86.
Hamilton (Moscow) beds Gilboa, N. Y.

Sigillaria (?) gilboensis Goldring

6575 HOLOTYPE *Sigillaria (?) gilboensis* Goldring. N. Y. S. M. Bul. 267. 1926. p. 86; 4th plate following p. 86.
Hamilton (Moscow) beds Gilboa, N. Y.

SPHENOPHYCUS Ruedemann

Sphenophycus (?) sp.

6576 HYPOTYPE (original & counterpart) *Sphenophycus (?)* sp. Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 17, pl. 4, fig. 2.
Bertie wl. Litchfield, Herkimer co. N. Y.
E. Reinhard, coll.

6577 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 4, fig. 3.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Sphenophycus sp.

6578 HYPOTYPE (original & counterpart) *Sphenophycus* sp. Ruedemann. G. S. A., Mem. 2. 1934. p. 67, pl. 3, fig. 9.
Normanskill sh. Mt Merino, near Hudson, N. Y.
M. Sheehy & W. F. Cooper, coll. 1892

Sphenophycus graptolithiferum Ruedemann

6579 HOLOTYPE *Sphenophycus graptolithiferum* Ruedemann. G. S. A., Mem. 2. 1934. p. 67, pl. 2.
Schaghticoke sh. Schaghticoke, Rensselaer co. N. Y.
R. Ruedemann, coll. 1902

On slab with types of *Staurograptus dichotomus,* pl. 2; *Acrotreta bisecta,* pl. 17, fig. 1.

6580 PARATYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 10.
Schaghticoke sh. Schaghticoke, N. Y.
R. Ruedemann, coll. 1902

6581 PARATYPE (original & counterpart) Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 11.
Schaghticoke sh. Schaghticoke, N. Y.
R. Ruedemann, coll. 1902

On slab with types of *Megastylia caliciformis,* pl. 7, fig. 10; *Spirorbis* sp., pl. 3, fig. 11.

6582 PARATYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 12.
Schaghticoke sh. Schaghticoke, N. Y.
R. Ruedemann, coll. 1902

Sphenophycus latifolium (Hall)

6583 HYPOTYPE (original & counterpart) *Sphenophycus latifolius* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 73, pl. 1. fig. 1.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6584 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 1, fig. 2.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6585 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 1, fig. 3.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6586 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 1, fig. 4.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6587 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 1, fig. 5.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6588 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 1, fig. 6.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6589 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 1, fig. 7.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6590 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 1, fig. 8.
Schenectady beds Aqueduct, near Schenectady, N. Y
R. Ruedemann, coll.

6591. HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 1, fig. 10.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6592 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 1.
Sphenophycus latifolium Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 1.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6593 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 2.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 2.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6594 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 3.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 3.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6595 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 4.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 4.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6596 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 5.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 5.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6597 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 6.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6598 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 7.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 7.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6599 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 8.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6600 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 9.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6601 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 10.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 6.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6602 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 11.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6603 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 12.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6604 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 13.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 3, fig. 8.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

6605 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 2, fig. 14.
Schenectady beds Aqueduct, near Schenectady, N. Y.
R. Ruedemann, coll.

Sphenophycus lobatum Ruedemann

6606 HOLOTYPE *Sphenophycus lobatum* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 6, pl. 1, fig. 1.
Utica sh. Marcy creek, Oneida co. N. Y.
R. Ruedemann, coll.

Sphenothallus latifolius see **Sphenophycus latifolium**

ALGA

6607 HYPOTYPE *Alga* Clarke. N. Y. S. M. Mem. 9, pt 1. 1908. p. 114, pl. 48, fig. 6, 7.
St Alban beds Cape Rosier cove, P. Q. Can.

ALGA

6608 HYPOTYPE *Alga* Clarke. N. Y. S. M. Mem. 9, pt 1. 1908. pl. 48, fig. 8.
Grande Grève ls. Grande Grève, P. Q.

ALGA ?

6609 HYPOTYPE Marine *alga?* Clarke. N. Y. S. M. Mem. 9, pt. 2. 1909. p. 51, pl. 11, fig. 16.
Dalhousie beds Stewart's cove, Dalhousie, N. B.

PROTOZOA

ACANTHOSPHAERA Ehrenberg

Acanthosphaera minuta Ruedemann & Wilson

6610 HOLOTYPE *Acanthosphaera minuta* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1571, pl. 6, fig. 13 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (22).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6611 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 16 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (21).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

Acanthosphaera perspinosa Ruedemann & Wilson

6612 HOLOTYPE *Acanthosphaera perspinosa* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1571, pl. 6, fig. 30 (slide no. 1).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (24).
Normanskill chert Glenmont, Albany co. N. Y.
T. Y. Wilson, coll. 1934

Acanthosphaera robusta Ruedemann & Wilson

6613 HOLOTYPE *Acanthosphaera robusta* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1571, pl. 6, fig. 5 (slide no. 50).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (23).
Normanskill radiolarite
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

CENOSPHAERA Ehrenberg

Cenosphaera antiqua Ruedemann & Wilson

6614. HOLOTYPE *Cenosphaera antiqua* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1567, pl. 6, fig. 33 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (2).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6615 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 6 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (4).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6616 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 35 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (3).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

Cenosphaera pachyderma Rüst

6617. HYPOTYPE *Cenosphaera pachyderma* Rüst. Palaeontogr. 1885. 31:286.
Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1567, pl. 5, fig. 33 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (5).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6618 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 34 (slide no. 37).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (7).
Normanskill chert Glasco, Ulster co. N. Y.
T. Y. Wilson, coll. 1934

6619 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 35 (slide no. 37).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (6).
Normanskill chert Glasco, Ulster co. N. Y.
T. Y. Wilson, coll. 1934

CHOENICOSPHAERA Haeckel

Choenicosphaera brevispina Ruedemann & Wilson

6620 HOLOTYPE *Choenicosphaera brevispina* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1568, pl. 6, fig. 34 (slide no. 1).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (10).
Normanskill chert Glenmont, Albany co. N. Y.
T. Y. Wilson, coll. 1934

6621 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 36 (slide no. 1).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (9).
Normanskill chert Glenmont, Albany co. N. Y.
T. Y. Wilson, coll. 1934

Choenicosphaera multispinosa Ruedemann & Wilson

6622 HOLOTYPE *Choenicosphaera multispinosa* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1568, pl. 6, fig. 12 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (8).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

DORYDICTYUM Hinde

Dorydictyum magnum Ruedemann & Wilson

6623 HOLOTYPE *Dorydictyum magnum* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1574, pl. 5, fig. 2 (slide no. 1).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (2).
Normanskill chert Glenmont, Albany co. N. Y.
T. Y. Wilson, coll. 1934

6624 PARATYPE Ruedemann & Wilson. G.S.A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 3 (slide no. 50).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (3).
Normanskill radiolarite
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6625 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 7 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (4).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6626 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 10 (slide no. 1).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (5).
Normanskill chert Glenmont, Albany co. N. Y.
T. Y. Wilson, coll. 1934

Dorydictyum minutum Ruedemann & Wilson

6627 HOLOTYPE *Dorydictyum minutum* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1574, pl. 5, fig. 1b (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (1b).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6628 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 1a (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (1a).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6629 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 1c (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (1c).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

DORYPLEGMA Hinde

Doryplegma armatum Ruedemann & Wilson

6630 HOLOTYPE *Doryplegma armatum* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1575, pl. 5, fig. 18 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (8).
Normanskill chert Fly summit, Washington co., N. Y.
T. Y. Wilson, coll. 1934

6631 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 11 (slide no. 18).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (9).
Normanskill chert
Half mile south of Victory Mills, Saratoga co. N. Y.
T. Y. Wilson, coll. 1934

6632. PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 12 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12(7).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6633 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 17 (slide no. 18).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (10).
Normanskill chert
Half mile south of Victory Mills, Saratoga Co. N. Y.
T. Y. Wilson, coll. 1934

Doryplegma nux Ruedemann & Wilson

6634 HOLOTYPE *Doryplegma nux* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1575, pl. 5, fig. 16 (slide no. 51).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (11).
Normanskill chert breccia
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

Doryplegma priscum Ruedemann & Wilson

6635 HOLOTYPE *Doryplegma priscum* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1575, pl. 5, fig. 5 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (6)
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

DRUPPULA Haeckel

Druppula (Drupulissa) simplex Ruedemann & Wilson

6636 HOLOTYPE *Druppula (Drupulissa) simplex* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1576, pl. 5, fig. 9 (slide no. 35).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (13).
Normanskill chert
East side of Flint Mine hill, Greene co. N. Y.
T. Y. Wilson, coll. 1934

6637 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 22 (slide no. 35).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (14).
Normanskill chert
East side of Flint Mine hill, Greene co. N. Y.
T. Y. Wilson, coll. 1934

HALICALYPTRA Ehrenberg

Halicalyptra ambulans Ruedemann & Wilson

6638 HOLOTYPE *Halicalyptra ambulans* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1578, pl. 6, fig. 4 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 13 (6).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

Halicalyptra similis Ruedemann & Wilson

6639 HOLOTYPE *Halicalyptra similis* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1578, pl. 6, fig. 3 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 13 (5).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

HALIOMMA Ehrenberg

Haliomma antiquum Ruedemann & Wilson

6640 HOLOTYPE *Haliomma antiquum* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1573, pl. 5, fig. 4 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (4).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6641 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 26 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (15).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

Haliomma penrosei Ruedemann & Wilson

6642. HOLOTYPE *Haliomma penrosei* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1573, pl. 5, fig. 32 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11(16).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6643 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 29 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (17).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6644 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 10 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 13 (7).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

HELIOSPHAERA Haeckel

Heliosphaera haeckeli Ruedemann & Wilson

6645 HOLOTYPE *Heliosphaera haeckeli* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1572, pl. 5, fig. 28 (slide no. 50).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (2).
Normanskill radiolarite
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6646 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 6 (slide no. 50).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (3).
Normanskill radiolarite
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6647 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 27 (slide no. 50).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (4).
Normanskill radiolarite
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6648 PARATYPE *?Heliosphaera haeckeli* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 8 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 13 (8).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson. coll. 1934

Heliosphaera micropora Ruedemann & Wilson

6649 HOLOTYPE *Heliosphaera micropora* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1572, pl. 5, fig. 20 (slide no. 51).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (9).
Normanskill chert breccia
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6650 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 8 (slide no. 51).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (13).
Normanskill chert breccia
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6651 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 19 (slide no. 51).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (10).
Normanskill chert breccia
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6652 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 30 (slide no. 51).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (12).
Normanskill chert breccia
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

6653 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 36 (slide no. 51).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (11).
Normanskill chert breccia
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

Heliosphaera rüsti Ruedemann & Wilson

6654 HOLOTYPE *Heliosphaera rüsti* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1572, pl. 5, fig. 14 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (5).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6655 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 13 (slide no. 18).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (6).
Normanskill chert
Half mile south of Victory Mills, Saratoga co. N. Y.
T. Y. Wilson, coll. 1934

6656 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 15 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (8).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6657 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 5, fig. 31 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (7).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

Heliosphaera venusta Ruedemann & Wilson

6658 HOLOTYPE *Heliosphaera venusta* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1572, pl. 5, fig. 24 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 11 (1).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

LITHOCAMPE Ehrenberg

Lithocampe (?) spinosa Ruedemann & Wilson

6659 HOLOTYPE *Lithocampe (?) spinosa* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1579, pl. 6, fig. 2 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 13 (4).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

NODOSINELLA Brady

Nodosinella clarkei Beede

6660 COTYPE *Nodosinella clarkei* Beede. N. Y. S. M. Bul. 149. 1911. p. 175; left fig. p. 175.
Mississippian
Grand Entry, Coffin isl., Magdalen isl., Gulf of St Lawrence
J. M. Clarke, coll.

On slab with types of *Nodosinella clarkei,* low. right and up. right fig. p. 175.

6661 COTYPE Beede. N. Y. S. M. Bul. 149. 1911 up. right fig. p. 175.
Mississippian
Grand Entry, Coffin isl., Magdalen isl., Gulf of St Lawrence
J. M. Clarke, coll.

On slab with types of *Nodosinella clarkei,* left fig. and low. right fig. p. 175.

6662 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. low. right fig. p. 175.
Mississippian
Grand Entry, Coffin isl., Magdalen isl., Gulf of St Lawrence
J. M. Clarke, coll.

On slab with types of *Nodosinella clarkei,* left fig. and up. right fig. p. 175.

SETHOCAPSA Haeckel

Sethocapsa pytine Ruedemann & Wilson

6663 HOLOTYPE *Sethocapsa pytine* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1579, pl. 6, fig. 7 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 13 (2).
Normanskill chert Fly summit, Washington co. N. Y
T. Y. Wilson, coll. 1934

6664 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 9 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 13 (3).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

SIPHONOSPHAERA J. Müller

Siphonosphaera (Merosiphonia) streptosiphonia Ruedemann & Wilson

6665 HOLOTYPE *Siphonosphaera (Merosiphonia) streptosiphonia* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1568, pl. 6, fig. 28 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (11).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6666 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 37 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (12).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

SPHAEROZOUM Meyen

Sphaerozoum minutum Ruedemann & Wilson

6667 HOLOTYPE *Sphaerozoum minutum* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1566, pl. 5, fig. 25 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (1).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

SPONGOPRUNUM Haeckel

Spongoprunum oligoporum Ruedemann & Wilson

6668 HOLOTYPE *Spongoprunum oligoporum* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1577, pl. 5, fig. 23 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (15).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

SPONGOTROCHUS Haeckel

Spongotrochus primaevus Ruedemann & Wilson

6669 HOLOTYPE *Spongotrochus primaevus* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1577, pl. 6, fig. 1 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 13 (1).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

STAUROSPHAERA Haeckel

Staurosphaera crassispina Ruedemann & Wilson

6670 HOLOTYPE *Staurosphaera crassispina* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1570, pl. 6, fig. 29 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (19).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

Staurosphaera sancta Ruedemann & Wilson

6671 HOLOTYPE *Staurosphaera sancta* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1570, pl. 6, fig. 31 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (18).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

STYLOSTAURUS Haeckel

Stylostaurus hindei Ruedemann & Wilson

6672 HOLOTYPE *Stylostaurus hindei* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1570, pl. 6, fig. 15 (slide no. 37).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (20).
Normanskill chert Glasco, Ulster co. N. Y.
T. Y. Wilson, coll. 1934

TRIPOSPHAERA Hinde

Triposphaera (?) maxima Ruedemann & Wilson

6673 HOLOTYPE *Triposphaera (?) maxima* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1576, pl. 5, fig. 21 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 12 (12).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

XIPHOSPHAERA Haeckel

Xiphosphaera brachyacantha Ruedemann & Wilson

6674 HOLOTYPE *Xiphosphaera brachyacantha* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1569, pl. 6, fig. 20 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (14).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

Xiphosphaera macracantha Ruedemann & Wilson

6675 HOLOTYPE *Xiphosphaera macracantha* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1569, pl. 6, fig. 14 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (15).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6676 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 21 (slide no. 58).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (16).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll. 1934

6677 PARATYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 32 (slide no. 50).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (17).
Normanskill radiolarite
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

Xiphosphaera parva Ruedemann & Wilson

6678 HOLOTYPE *Xiphosphaera parva* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, p. 1569, pl. 6, fig. 22 (slide no. 27).
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 10 (13).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll. 1934

RADIOLARIA

6679 HYPOTYPE *Radiolaria* Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 3, fig. 1 (slide no. 1).
Normanskill chert Glenmont, Albany co. N. Y.
T. Y. Wilson, coll. 1934

6680 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 3, fig. 2 (slide no. 58).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll.

6681 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 4, fig. 1 (slide no. 50).
Normanskill chert
Mile west of Ghent, Columbia co. N. Y.
T. Y. Wilson, coll.

RADIOLARIAN spicules

6682 HYPOTYPE *Radiolarian* spicules Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 4, fig. 2 (slide no. 51).
Normanskill chert Near Ghent, N. Y.
T. Y. Wilson, coll.

6683 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 17 (slide no. 58).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll.

RADIOLARIAN spicules and fragments of tests

6684 HYPOTYPE *Radiolarian* spicules and fragments of tests Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 11 (slide no. 50).
Normanskill chert Mile west of Ghent, N. Y.
T. Y. Wilson, coll.

6685 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 18 (slide no. 51).
Normanskill chert Near Ghent, N. Y.
T. Y. Wilson, coll.

PORIFERA

AMBLYSIPHONELLA Steinmann

Amblysiphonella prosseri Clarke

6686 COTYPE *Amblysiphonella prosseri* Clarke. Amer. Geol. 1897. v. 20, no. 6, p. 387, pl. 23, fig. 1, 2.
Wabaunsee formation Nehawka and Weeping Water, Nebr.
Charles S. Prosser, coll.

6687 COTYPE Clarke. Amer. Geol. 1897. v. 20, no. 6, pl. 23, fig. 3.
Wabaunsee formation Nehawka and Weeping Water, Nebr.
Charles S. Prosser, coll.

6688 COTYPE Clarke. Amer. Geol. 1897. v. 20, no. 6, pl. 23, fig. 4.
Wabaunsee formation Nehawka and Weeping Water, Nebr.
Charles S. Prosser, coll.

6689 COTYPE Clarke. Amer. Geol. 1897. v. 20, no. 6, pl. 23, fig. 5.
Wabaunsee formation Nehawka and Weeping Water, Nebr.
Charles S. Prosser, coll.

6690 COTYPE Clarke. Amer. Geol. 1897. v. 20, no. 6, pl. 23, fig. 6.
Wabaunsee formation Nehawka and Weeping Water, Nebr.
Charles S. Prosser, coll.

ARMSTRONGIA Clarke

Armstrongia (?) clarkei Caster

6691 HOLOTYPE: HOLOPLASTOTYPE *Armstrongia oryx* Clarke. N. Y. S. M. Bul. 219-220. 1920. p. 143, pl. 1, fig. 1.
Armstrongia (?) clarkei Caster. Palaeontogr. Amer. 1941. v. 2, no. 12, p. 13; p. 14, fig. 2; pl. 1, fig. 1-4.
Chadakoin formation (probably)
Nine miles south of Erie, Pa.
E. J. Armstrong, coll.

Armstrongia oryx (Clarke)

6692 COTYPE: COPLASTOTYPE *Ceratodictya oryx* Clarke. N. Y. S. M. Bul. 196. 1918. p. 180, pl. 2, fig. 1.
Armstrongia oryx Caster. Palaeontogr. Amer. 1941. v. 2, no. 12, p. 13, pl. 1, fig. 6.
Canadaway formation (probably)
Six miles southeast of Erie, Pa.
E. J. Armstrong, coll.

6693 COTYPE Clarke. N. Y. S. M. Bul. 196. 1918. pl. 2, fig. 2.
Caster. Palaeontogr. Amer. 1941. v. 2, no. 12, pl. 1, fig. 5.
Canadaway formation (probably)
Six miles southeast of Erie, Pa.
E. J. Armstrong, coll.

Armstrongia oryx (part) see **Armstrongia (?) clarkei**

CALATHOSPONGIA Hall & Clarke

Calathospongia carceralis Hall & Clarke

6694 COTYPE *Calathospongia carceralis* Hall & Clarke. N. Y. S. M., Mem. 2. 1898. pl. 51, fig. 2, 3.
Waverly group Richfield, Ohio

Ceratodictya oryx see **Armstrongia oryx**

CLIONOLITHES Clarke

Clionolithes canna Price

6695 HYPOTYPE *Clionolithes canna* Price. W. Va. Geol. Surv., Rep't on Raleigh Co. 1916. p. 688.
Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 101, fig. 90 (also Yale Univ. Press. New Haven. 1921).
Winifrede ls. Raleigh co. W. Va.

6696 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 101, fig. 91 (also Yale Univ. Press. New Haven. 1921).
Brush Creek ls. Preston co. W. Va.

Clionolithes palmatus Clarke

6697 COTYPE *Clionolithes palmatus* Clarke. N. Y. S. M. Bul. 121. 1908. p. 169, pl. 12, fig. 1.
Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 88,; p. 101, fig. 92 (also Yale Univ. Press. New Haven. 1921).
Portage beds Correll's Point, N. Y.

6698 COTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 12, fig. 2.
Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 101, fig. 93 (also Yale Univ. Press. New Haven. 1921).
Portage beds Correll's Point, N. Y.

Clionolithes (Vioa) priscus see (under Vermes) **Palaeosabella prisca**

Clionolithes quaerens Ruedemann

6699 HOLOTYPE *Clionolithes quaerens* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 38; p. 39, fig. 21.
Whetstone Gulf formation
Station 1 of the Wood creek section, N. Y.
Rust Purchase

Clionolithes radicans Clarke

6700 COTYPE *Clionolithes radicans* Clarke. N. Y. S. M. Bul. 121. 1908. p. 168, pl. 9, fig. 2.
Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 88; p. 86, fig. 70 (also Yale Univ. Press. New Haven. 1921).
Chemung beds Steuben co. N. Y.

6701 COTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 10.
Onondaga ls. Becraft Mt, N. Y.

6702 COTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 11, fig. 1.
Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 87, fig. 72 (also Yale Univ. Press. New Haven. 1921).
Chemung ss. Mansfield, Pa.

Clionolithes reptans Clarke

6703 HOLOTYPE *Clionolithes reptans* Clarke. N. Y. S. M. Bul. 121. 1908. p. 168, pl. 11, fig. 3.
Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 88; p. 100, fig. 87 (also Yale Univ. Press. New Haven. 1921).
Oriskany ls. Becraft Mt, N. Y.

6704 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 101, fig. 89 (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

CRYPTODICTYA Hall

Cryptodictya tylea Clarke

6705 COTYPE *Cryptodictya tylea* Clarke. N. Y. S. M. Bul. 196. 1918. p. 184, pl. 4, fig. 1.
Chemung group
Gorge of Six Mile creek, seven miles east of Erie, Pa.
E. J. Armstrong, coll.
On slab with types of *Cryptodictya tylea,* pl. 4, fig. 4, 5.

6706 COTYPE Clarke. N. Y. S. M. Bul. 196. 1918. pl. 4, fig. 2.
Chemung group
Gorge of Six Mile creek, seven miles east of Erie, Pa.
E. J. Armstrong, coll.
On slab with type of *Cryptodictya tylea,* pl. 4, fig. 3.

6707 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 196. 1918. pl. 4, fig. 3.
Chemung group
Gorge of Six Mile creek, seven miles east of Erie, Pa.
E. J. Armstrong, coll.
On slab with type of *Cryptodictya tylea,* pl. 4, fig. 2.

6708 COTYPE Clarke. N. Y. S. M. Bul. 196. 1918. pl. 4, fig. 4.
Chemung group
Gorge of Six Mile creek, seven miles east of Erie, Pa.
E. J. Armstrong, coll.
On slab with types of *Cryptodictya tylea,* pl. 4, fig. 1,5.

6709 COTYPE Clarke. N. Y. S. M. Bul. 196. 1918. pl. 4, fig. 5.
Chemung group
Gorge of Six Mile creek, seven miles east of Erie, Pa.
E. J. Armstrong, coll.
On slab with types of *Cryptodictya tylea,* pl. 4, fig. 1,4.

CYATHODICTYA Hall & Clarke

Cyathodictya (?) pyriformis Ruedemann

6710 HOLOTYPE *Cyathodictya (?) pyriformis* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 19; p. 19, fig. 4,4a.
Up. Utica sh. In Ohisa creek, Newville, N. Y
R. Ruedemann, coll

Cyathodictya reticulata (Walcott)

6711 HYPOTYPE *Cyathodictya reticulata* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 14, pl. 4, fig. 1.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

6712 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 4, fig. 2,3.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Cyathodictya ? tubularis Ruedemann

6713 HOLOTYPE *Cyathodictya ? tubularis* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 75; p. 76, fig. 12.

Ruedemann. G. S. A., Mem. 2. 1934. p. 70, pl. 7, fig. 2.

Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

On slab with type of *Cyathodictya ? tubularis,* p. 76, fig. 8.

6714 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 76, fig. 8.

Ruedemann. G. S. A., Mem. 2. 1934. pl. 7, fig. 1.

Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

On slab with type of *Cyathodictya ? tubularis,* p. 76, fig. 12.

6715 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 76, fig. 9.

Ruedemann. G. S. A., Mem. 2. 1934. pl. 7, fig. 5.

Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

On slab with type of *Cyathodictya ? tubularis,* pl. 76, fig. 10.

6716 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 76, fig. 10.

Ruedemann. G. S. A., Mem. 2. 1934. pl. 7, fig. 4.

Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

On slab with type of *Cyathodictya ? tubularis,* p. 76, fig. 9.

6717 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 76, fig. 11.

Ruedemann. G. S. A., Mem. 2. 1934. pl. 7, fig. 3.

Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

DICTYOSPONGIA Hall & Clarke

Dictyospongia charita Hall & Clarke

6718 HOLOTYPE *Dictyospongia charita* Hall & Clarke. N. Y. S. M., Mem. 2. 1898. p. 74, pl. 15, fig. 4.
Chemung beds Wellsville, N. Y.
E. B. Hall, coll.

Dictyospongia sceptrum (Hall)

6719 HYPOTYPE *Dictyospongia sceptrum* Hall & Clarke. N. Y. S. M., Mem. 2. 1898. p. 73, pl. 14, fig. 6.
Chemung beds Wellsville, N. Y.

FOERSTELLA Ruedemann

Foerstella flabellata Ruedemann

6720 HOLOTYPE *Foerstella flabellata* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 31, pl. 3, fig. 3,6,7,8.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

6721 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 31, fig. 16.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

6722 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 31, fig. 17.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

6723 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 3, fig. 4,5.
Up. Utica sh. Holland Patent, N. Y.
R. Ruedemann, coll.

Foerstella rotunda Ruedemann

6724 HOLOTYPE *Foerstella rotunda* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 30, pl. 2, fig. 1,2.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

GRAPTOSPONGIA Ruedemann

Graptospongia pusilla Ruedemann

6725 HOLOTYPE *Graptospongia pusilla* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 485; p. 485, fig. 468.
Ruedemann. G. S. A., Mem. 2. 1934. p. 68; p. 21, fig. 5; pl. 7, fig. 12.
Normanskill sh. Schuylerville, Saratoga co. N. Y.
R. Ruedemann, coll. 1902

6726 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 485, fig. 467.
Ruedemann. G. S. A., Mem. 2. 1934. p. 22, fig. 6.
Normanskill sh. Schuylerville, N. Y.
R. Ruedemann, coll. 1902

HYDNOCERAS Conrad

Hydnoceras lutheri Hall & Clarke

6727 COTYPE *Hydnoceras lutheri* Hall & Clarke. N. Y. S. M., Mem. 2. 1898. pl. 8, fig. 7.
Chemung group Segur's gully, Italy, Yates co. N. Y.

6728 COTYPE Hall & Clarke. N. Y. S. M., Mem. 2. 1898. pl. 8, fig. 8.
Chemung group Segur's gully, Italy, N. Y.

6729 COTYPE Hall & Clarke. N. Y. S. M., Mem. 2. 1898. pl. 8, fig. 9.
Chemung group Segur's gully, Italy, N. Y.

Hydnoceras walcotti Clarke

6730 HOLOTYPE: HOLOPLASTOTYPE *Hydnoceras walcotti* Clarke. N. Y. S. M. Bul. 196. 1918. p. 177, pl. 1.
Chemung group Near Wellsburg, N. Y.
L. D. Shoemaker, coll.

HYDNOCERINA Clarke

Hydnocerina armstrongi Clarke

6731 COTYPE *Hydnocerina armstrongi* Clarke. N. Y. S. M. Bul. 196. 1918. p. 182, pl. 3.
Chemung group Eight miles east of Erie, Pa.
E. J. Armstrong, coll.

6732 COTYPE Clarke. N. Y. S. M. Bul. 196. 1918. pl. 5, fig. 4, 5.
Chemung group Eight miles east of Erie, Pa.
E. J. Armstrong, coll.

ISCHADITES Lonsdale

Ischadites squamifer (Hall)

6566 HYPOTYPE *Ischadites squamifer* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 9; p. 9, fig. 1.
New Scotland beds Clarksville, N. Y.

MEGASTYLIA Ruedemann

Megastylia caliciformis Ruedemann

6733 HOLOTYPE *Megastylia caliciformis* Ruedemann. G. S. A., Mem. 2. 1934. p. 71, pl. 7, fig. 10.
Schaghticoke sh. Schaghticoke, N. Y.
R. Ruedemann, coll. 1902

On slab with types of *Sphenophycus graptolithiferum,* pl. 3, fig. 11; *Spirorbis* sp., pl. 3, fig. 11.

OZOSPONGIA Clarke

Ozospongia johnstoni Clarke

6734 COTYPE: COPLASTOTYPE *Ozospongia johnstoni* Clarke. N. Y. S. M. Bul. 196. 1918. p. 185, pl. 5, fig. 2.
Chemung ss. Hinsdale, N. Y.
John S. Johnston, coll.

6735 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 196. 1918. pl. 5, fig. 3.
Chemung ss. Hinsdale, N. Y.
John S. Johnston, coll.

6736 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 196. 1918. pl. 6.
Chemung ss. Hinsdale, N. Y.
John S. Johnston, coll.

PRISMODICTYA Hall & Clarke

Prismodictya cf. allegania Hall & Clarke

6737 MORPHOTYPE *Prismodictya* cf. *allegania* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 10 (D).
Hinsdale beds
2½ miles northeast of Andover, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

On slab with type of *Prismodictya* cf. *conradi,* fig. 10 (A).

Prismodictya baculum (Hall)

6738 HYPOTYPE *Prismodictya baculum* Hall & Clarke. N. Y. S. M., Mem. 2. 1898. p. 81, pl. 18, fig. 1, 2.
Chemung group Alfred, N. Y.

Prismodictya cf. conradi (Hall)

6739 MORPHOTYPE *Prismodictya* cf. *conradi* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 10(A).
Hinsdale beds 2½ miles northeast of Andover, N. Y.
J. G. Woodruff, coll. & don. 1934

On slab with type of *Prismodictya* cf. *allegania,* fig. 10 (D).

6740 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 10 (B).
Hinsdale beds
1½ miles southeast of Shongo, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

6741 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 10 (C).
Hinsdale beds 1½ miles southeast of Shongo, N. Y.
J. G. Woodruff, coll. & don. 1934

On slab with type of *Prismodictya* cf. *conradi,* fig. 10 (E).

6742 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 10 (E).
Hinsdale beds 1½ miles southeast of Shongo, N. Y.
J. G. Woodruff, coll. & don. 1934

On slab with type of *Prismodictya* cf. *conradi,* fig. 10 (C).

PSEUDOHYDNOCERAS Reimann

Pseudohydnoceras erraticum Reimann

6743 COTYPE *Pseudohydnoceras erraticum* Reimann. Buffalo Soc. Nat. Sci., Bul. 1935. v. 17, no. 1, p. 13, pl. 1, fig. 1,2.
Ludlowville sh. Eighteen Mile creek, Erie co. N. Y.
R. Ruedemann & J. T. Sanford, coll. 1930

PYRITONEMA McCoy

Pyritonema sp.

6744 HYPOTYPE *Pyritonema* sp. Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 4, fig. 9.
Up. Utica sh. Holland Patent, N. Y.
R. Ruedemann, coll.

Pyritonema capilliforme Ruedemann

6745 COTYPE *Pyritonema capilliforme* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 37, pl. 4, fig. 6.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

6746 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 4, fig. 7.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Pyritonema rigidum Ruedemann

6747 HOLOTYPE *Pyritonema rigidum* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 37; p. 35, fig. 20; pl. 4, fig. 8.
Normanskill sh. Mt. Merino, near Hudson, N. Y.
R. Ruedemann, coll.

SPHAERODICTYA Hall & Clarke

Sphaerodictya subsphaerica (Wolcott)

6748 HYPOTYPE *Sphaerodictya subsphaerica* Ruedemann. N. Y. S. M. Bul 262. 1925. p. 21, pl. 3, fig. 9,10.
Up. Utica sh. Marcy, N. Y.
R. Ruedemann, coll.

TEGANIUM Rauff

Teganium sp.

6749 HYPOTYPE *Teganium* sp. Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 28, fig. 14,15.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Teganium macrosclera Ruedemann

6750 HOLOTYPE *Teganium macrosclera* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 26; p. 26, fig. 12.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Teganium merino Ruedemann

6751 HOLOTYPE *Teganium merino* Ruedemann. N. Y. S. M. Bul. 327. 1942. p. 23, fig. 5 (10).
Normanskill sh. (Mount Merino member)
Mt Merino quarry, near Hudson, N. Y.
C. F. Kilfoyle, coll. 1937

Teganium minutum Ruedemann

6752 HOLOTYPE *Teganium minutum* Ruedemann. G. S. A., Mem. 2. 1934. p. 69, pl. 8, fig. 5.
Snake Hill sh.
Point where Deep Kill enters the Hudson river.
R. Ruedemann, coll. 1901

Teganium rauffi Ruedemann

6753 HOLOTYPE *Teganium rauffi* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 27, pl. 1, fig. 5.
Canajoharie sh. Dolgeville, N. Y.
R. Ruedemann, coll.

6754 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 28, fig. 13.
Canajoharie sh. Dolgeville, N. Y.
R. Ruedemann, coll.

6755 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 1, fig. 3.
Canajoharie sh. Dolgeville, N. Y.
R. Ruedemann, coll.

6756 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 1, fig. 4.
Canajoharie sh. Dolgeville, N. Y.
R. Ruedemann, coll.

6757 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 2, fig. 3.
Canajoharie sh. Dolgeville, N. Y.
R. Ruedemann, coll.

6758 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 2, fig. 4.
Canajoharie sh. Dolgeville, N. Y.
R. Ruedemann, coll.

6759 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 2, fig. 5.
Canajoharie sh. Dolgeville, N. Y.
R. Ruedemann, coll.

6760 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 4, fig. 4.
Canajoharie sh. Dolgeville, N. Y.
R. Ruedemann, coll.

Teganium subsphaericum Rauff

6761 HYPOTYPE *Teganium subsphaericum* Rauff. Palaeontogr. 1894. 40: 256.
Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 23, pl. 3, fig. 1.
Up. Utica sh. Holland Patent, N. Y.
Haskell purchase

6762 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 3, fig. 2.
Up. Utica sh. Holland Patent, N. Y.
Haskell purchase

TOPSENTIA Berg

Topsentia devonica Clarke

6763 COTYPE *Topsentia devonica* Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 88; p. 89, fig. 73 (also Yale Univ. Press. New Haven. 1921).
Mid. Devonian Iowa

6764 COTYPE Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 90, fig. 74, 75 (also Yale Univ. Press. New Haven. 1921).
Mid. Devonian Iowa

Vioa prisca see (under Vermes) **Palaeosabella prisca**

HEXACTINELLIDS

6765 HYPOTYPE *Hexactinellids* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 220, pl. A, fig. 1.
Grande Grève ls. Grande Grève, P. Q. Can.
J. M. Clarke, coll.

6766 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt. 1. 1908. pl. A, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll

6767 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6768 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1, 1908. pl. A, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6769 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6770 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6771 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6772 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6773 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6774 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6775 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt. 1. 1908. pl. A, fig. 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6776 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6777 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6778 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6779 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. A, fig. 15.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6780 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6781 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6782 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 18.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6783 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 19.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6784 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 20.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6785 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 21.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6786 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 22.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6787. HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 23.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6788 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 24.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6789 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 25.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

6790 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. B, fig. 26.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

SPONGE spicules

6791 HYPOTYPE *Sponge* spicule Ruedemann. G. S. A., Mem. 2. 1934. pl. 7, fig. 11.
Schaghticoke sh. Schaghticoke, N. Y.
On slab with type of *Hyolithes* sp., pl. 20, fig. 2.

6792 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 3, fig. 2 (slide no. 58).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll.

6793 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 23 (slide no. 27).
Deepkill chert
South end of Mt Merino, Columbia co. N. Y.
T. Y. Wilson, coll.

6794 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 25 (slide no. 58).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll.

6795 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 26 (slide no. 18).
Normanskill chert
Near Victory Mills, Saratoga co. N. Y.
T. Y. Wilson, coll.

6796 HYPOTYPE Ruedemann & Wilson. G. S. A., Bul. 1936. v. 47, no. 10, pl. 6, fig. 27 (slide no. 58).
Normanskill chert Fly summit, Washington co. N. Y.
T. Y. Wilson, coll.

SPONGE tissue, with HEXACTINS

6797 HYPOTYPE *Sponge* tissue, with *Hexactins* Ruedemann. G. S. A., Bul. 1929. v. 40, no. 2, pl. 11, fig. 3.
Permian tillite São Paulo, Brazil

ANTHOZOA

Aulopora arachnoidea see (under Bryoza) **Stomatopora arachnoidea**

CERATOPORA Grabau

"Ceratopora" (?) sp.

6798 HYPOTYPE *Ceratopora (?)* sp. Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 38, pl. 15, fig. 5.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

CHAETETES Fischer

Chaetetes carvalhoanus Katzer

6799 COTYPE *Chaetetes carvalhoanus* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.—Nat. Cl., Sitz. 1897. 46: 5.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 269, pl. 9, fig. 2a, e.
Devonian: Maecurú group Rio Maecurú, Brazil
F. Katzer, don.

6800 COTYPE Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. pl. 9, fig. 2c.
Devonian: Maecurú group Rio Maecurú, Brazil
F. Katzer, don

6801 COTYPE Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903 pl. 9, fig. 2d.
Devonian: Maecurú group Rio Maecurú, Brazil
F. Katzer, don.

Chaetetes compressus see (under Bryozoa) **Peronopora** cf. **compressa**

Chaetetes irregularis see (under Bryozoa) **Stigmatella irregularis**

ENTEROLASMA Simpson

Enterolasma cf. **caliculum** (Hall)

6802 HYPOTYPE *Streptelasma calicula* Hall. Pal. N. Y. 1852. 2:111.
Enterolasma cf. *caliculus* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 24, pl. 1, fig. 1.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll. & don.

FAVOSITES Lamarck

Favosites hemisphericus var. turbinatus see **Favosites turbinatus**

Favosites turbinatus Billings

6803 HYPOTYPE *Favosites turbinatus* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 8, pl. 1, fig. 1-7.
Onondaga ls. Western New York

HALYSITES Fischer

Halysites sp.

6804 HYPOTYPE *Halysites* sp. Clarke. N. Y. S. M. Bul. 149. 1911. p. 129, pl. 11.
Silurian boulder from the Devonian cgl.
Hugh Miller cliffs, Migouasha, P. Q. Can.

HELIOPHYLLUM Dana

"Heliophyllum" sp.

6805 HYPOTYPE *Heliophyllum* sp. indet. Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 28, pl. 1, fig. 4,5.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll. & don.

PALAEACTINIA Ruedemann

Palaeactinia halli Ruedemann

6806 HOLOTYPE *Palaeactinia halli* Ruedemann. G. S. A., Mem. 2. 1934. p. 72, pl. 10, fig. 1-3.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
R. Ruedemann, coll. 1899

PLEURODICTYUM Goldfuss

Pleurodictyum amazonicum Katzer

6807 HOLOTYPE *Pleurodictyum amazonicum* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46: 5.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 269, pl. 9, fig. 1a,b,c,d.
Devonian: Maecurú group Rio Maecurú, Brazil

Pleurodictyum lenticulare (Hall) var. laurentinum Clarke

6808 HOLOTYPE *Pleurodictyum lenticulare* var. *laurentinum* Clarke. N. Y. S. M. Bul. 107. 1907. p. 290; fig. p. 290.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 219, pl. 48, fig. 1.
Grande Grève ls. Grande Grève, P. Q. Can.

PLUMALINA Hall

Plumalina plumaria Hall

6809 HYPOTYPE *Plumalina plumaria* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 10; p. 11, fig. 2.
Ithaca beds Ithaca, N. Y.
J. W. Hall & G. B. Simpson, coll. 1870

6810 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 11, fig. 3.
Ithaca beds Ithaca, N. Y.
J. W. Hall & G. B. Simpson, coll. 1870

Streptelasma calicula see **Enterolasma cf. caliculum**

ZAPHRENTIS Rafinesque

Zaphrentis cf. racinensis Whitfield

6811 HYPOTYPE *Zaphrentis racinensis* Whitfield. Wis. Geol. Surv., Ann. Rep't (1879) 1880. p. 65.
Zaphrentis cf. *racinensis* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 23, pl. 1, fig. 2,3.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll. & don.

HYDROZOA ?

INCERTAE SEDIS

GRAPTOGEITONIA Ruedemann

Graptogeitonia adherens Ruedemann

6816 HOLOTYPE *Graptogeitonia adherens* Ruedemann. G. S. A., Mem. 2. 1934. p. 76, pl. 8, fig. 6.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann, coll. 1899

PAROPSONEMA Clarke

Paropsonema cryptophya Clarke

6817 HYPOTYPE *Paropsonema cryptophya* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 22, pl. 1, fig. 8.
Portage ss. West hill, near Naples, N. Y.

6818 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 2.
Portage ss. Johnson's glen, Canandaigua lake, N. Y.

PLECTODISCUS Ruedemann

Plectodiscus molestus Ruedemann

6830 HOLOTYPE: HOLOPLASTOTYPE *Plectodiscus molestus* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 26, pl. 3.
Ithaca beds Near Ithaca, N. Y.

STROMATOPOROIDEA

ACTINOSTROMA Nicholson

Actinostroma tenuissimum Parks

6812 HOLOTYPE *Actinostroma tenuissimum* Parks. Univ. Toronto Studies, Geol. Ser. 1909. 6:42, pl. 18, fig. 2, 9 (thin sect. no. 9, tangential).
Cobleskill ls. Schoharie co. N. Y.

6813 HOLOTYPE Parks. Univ. Toronto Studies, Geol. Ser. 1909. no. 6, pl. 18, fig. 3, 12 (thin sect. no. 9, vertical).
Cobleskill ls. Schoharie co. N. Y.

CLATHRODICTYON Nicholson & Murie

Clathrodictyon ostiolatum (Nicholson)

6814 HYPOTYPE *Stromatopora ostiolata* Nicholson. Ann. and Mag. Nat. Hist., 4th Ser. 1873. 12: 90.
Clathrodictyum ostiolatum Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 37, pl. 1, fig. 10, 11.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll. & don.

6815 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 1, fig. 12.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll. & don.

Clathrodictyum ostiolatum see **Clathrodictyon ostiolatum**
Coenostroma galtense see **Stromatopora galtensis**

STROMATOCERIUM Hall

Stromatocerium rugosum Hall

6819 HYPOTYPE *Stromatocerium rugosum* Hall. Pal. N. Y. 1847. 1: 48.
Parks. Univ. Toronto Studies, Geol. Ser. 1910. 7:11, pl. 21, fig. 3 (thin section no. 1431, vertical).
Black River group Lake Champlain, N. Y.

STROMATOPORA Goldfuss

Stromatopora clarkei Parks

6820 HOLOTYPE *Stromatopora clarkei* Parks. Univ. Toronto Studies, Geol. Ser. 1909. 6: 48, pl. 17, fig. 12 (thin sect. no. 9, vertical).
Cobleskill ls. Schoharie co. N. Y

Stromatopora constellata Hall

6821 HYPOTYPE *Stromatopora constellata* Hall. Pal. N. Y. 1852. 2: 324.

Parks. Univ. Toronto Studies, Geol. Ser. 1909. 6: 46, pl. 17, fig. 10; pl. 18, fig. 8 (thin sect. no. 851, tangential).

Cobleskill ls. Schoharie co. N. Y.

Stromatopora foveolata (Girty)

6822 HYPOTYPE *Syringostroma foveolatum* Girty. N. Y. S. M., Ann. Rep't 48. 1895. 2: 295.

Stromotopora foveolata Parks. Univ. Toronto Studies, Geol. Ser. 1909. 6: 20, pl. 17, fig. 5, 6; pl. 18, fig. 10 (thin sect. no. 1736, vertical).

Coeymans ls. Cedarville, N. Y.

6823 HYPOTYPE Parks. Univ. Toronto Studies, Geol. Ser. 1909. No. 6, pl. 17, fig. 7; pl. 18, fig. 4 (thin sect. no. 1733, tangential).

Coeymans ls. Cedarville, N. Y.

Stromatopora galtensis (Dawson)

6824 HYPOTYPE *Coenostroma galtense* Dawson. Life's Dawn on the Earth. 1875. p. 160.

Stromatopora galtensis Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 36, pl. 1, fig. 13.

Guelph dol. Rochester, N. Y.

A. L. Arey, coll. & don.

Stromatopora ostiolata see Clathrodictyon ostiolatum

SYRINGOSTROMA Nicholson

Syringostroma barretti Girty

6825 HYPOTYPE *Syringostroma barretti* Girty. N. Y. S. M., Ann. Rep't 48. 1895. 2: 296.

Parks. Univ. Toronto Studies, Geol. Ser. 1909. 6:16, pl. 17, fig. 1 (thin sect. no. 735, tangential).

Coeymans ls. Clarksville, N. Y

6826 HYPOTYPE Parks. Univ. Toronto Studies, Geol. Ser. 1909. No. 6, pl. 17, fig. 2 (thin sect. no. 736, vertical).

Coeymans ls. Clarksville, N. Y.

6827 HYPOTYPE Parks. Univ. Toronto Studies, Geol. Ser. 1909. No. 6, pl. 18, fig. 5 (thin sect. no. 734, tangential).
Coeymans ls. Clarksville, N. Y.

Syringostroma centrotum Girty

6828 HYPOTYPE *Syringostroma centrotum* Girty. N. Y. S. M., Ann. Rep't 48. 1895. 2: 293.
Parks. Univ. Toronto Studies, Geol. Ser. 1909. 6:12, pl. 16, fig. 6, 7; pl. 18, fig. 11 (thin sect. no. 1757, vertical).
Coeymans ls. Cedarville, N. Y.

6829 HYPOTYPE Parks. Univ. Toronto Studies, Geol. Ser. 1909. No. 6, pl. 16, fig. 8, 9; pl. 18, fig. 6 (thin sect. no. 1756, tangential).
Coeymans ls. Cedarville, N. Y.

Syringostroma foveolatum see **Stromatopora foveolata**

GRAPTOZOA*

ACANTHOGRAPTUS Spencer

Acanthograptus chaetophorus see **Thamnograptus ? chaetophorus**

Acanthograptus granti Spencer

6831 HYPOTYPE *Acanthograptus granti* Spencer. Can. Nat., n.s. 1878. 8: 461.
Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 6, fig. 3; pl. 7, fig. 3.
Lockport ls. Hamilton, Ont. Can.
John Schuler, coll.

Acanthograptus multispinus see **Ptiograptus multispinus**

Acanthograptus walkeri (Spencer)

6832 HYPOTYPE *Inocaulis walkeri* Spencer. Can. Nat., n. s. 1882. 10: 165 (nom. nud.).
Acanthograptus walkeri Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 194; p. 195, fig. 97.
Rochester sh. Middleport, N. Y.
J. M. Clarke & D. D. Luther, coll. 1899

6833 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 195, fig. 98.
Rochester sh. Middleport, N. Y.
J. M. Clarke & D. D. Luther, coll. 1899

6834 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 6, fig. 1.
Rochester sh. Middleport, N. Y.
J. M. Clarke & D. D. Luther, coll. 1899

6835 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 6, fig. 2.
Rochester sh. Middleport, N. Y.
J. M. Clarke & D. D. Luther, coll. 1899

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* In Ruedemann, Geol. Soc. Amer., Mem. 19 (1947), *Ascograptus, Chaunograptus* and *Mastigograptus* are listed as possibly belonging under the Hydrozoa. Kozlowski (1948) refers the graptolites to the hemichords.

6836 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 19; p. 19, fig. 3.
Gasport lens of Lockport ls. Gasport, N. Y.
Reinhard purchase

6837 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 19, fig. 4.
Gasport lens of Lockport ls. Gasport, N. Y.
Reinhard purchase

AIROGRAPTUS Ruedemann

Airograptus furciferus (Ruedemann)

6838 HYPOTYPE *Airograptus furciferus* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 17; p. 19, fig. 7.
Deepkill (age) sh.
Spring creek near Bellefonte, Center co. Pa.
E. S. Moore, coll.

6839 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 19, fig. 8.
Deepkill (age) sh.
Spring creek near Bellefonte, Center co. Pa.
E. S. Moore, coll.

AMPHIGRAPTUS Lapworth

Amphigraptus divergens (Hall)

6840 TOPOTYPE *Graptolithus divergens* Hall. Pal. N. Y. 1859. 3: 509.
Amphigraptus divergens Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 271; p. 272, fig. 189; pl. 15, fig. 3.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

ANISOGRAPTUS Ruedemann

Anisograptus matanensis Ruedemann

6841 HOLOTYPE *Anisograptus matanensis* Ruedemann. Amer. Jour. Sci. 1937. 33: 62; p. 58, fig. 6.
Matane sh. Matane, Quebec
Ward exchange

6842 PARATYPE Ruedemann. Amer. Jour. Sci. 1937. 33: 58, fig. 7.
Matane sh. Matane, Quebec
Ward exchange

6843 PARATYPE Ruedemann. Amer. Jour. Sci. 1937. 33: 58, fig. 8.
Matane sh. Matane, Quebec
Ward exchange

6844 PARATYPE Ruedemann. Amer. Jour. Sci. 1937. 33: 58, fig. 9.
Matane sh. Matane, Quebec
Ward exchange

ASCOGRAPTUS Ruedemann

Ascograptus similis Ruedemann

6845 HOLOTYPE *Ascograptus similis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 18, pl. 6, fig. 6.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with types of *Ascograptus similis,* pl. 6, fig. 3,4,5,7.

6846 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 6, fig. 1.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with type of *Ascograptus similis,* pl. 6, fig. 2.

6847 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 6, fig. 2.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with type of *Ascograptus similis,* pl. 6, fig. 1.

6848 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 6, fig. 3.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with types of *Ascograptus similis,* pl. 6, fig. 4,5,6,7.

6849 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 6, fig. 4.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with types of *Ascograptus similis,* pl. 6, fig. 3,5,6,7.

6850 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 6, fig. 5.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with types of *Ascograptus similis,* pl. 6, fig. 3,4,6,7.

6851 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 6, fig. 7.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with types of *Ascograptus similis,* pl. 6, fig. 3,4,5,6.

AZYGOGRAPTUS Nicholson

Azygograptus ? simplex Ruedemann

6852 COTYPE *Azygograptus ? simplex* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 258; p. 259, fig. 163.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

6853 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 259, fig. 164.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1887

On slab with types of *Corynoides curtus* mut. *pristinus,* p. 235, fig. 131; *Dicellograptus sextans,* pl. 19, fig. 1.

6854 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 259, fig. 165.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

On slab with type of *Azygograptus ? simplex,* p. 259, fig. 168.

6855 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 259, fig. 166.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899
On slab with type of *Azygograptus ? simplex,* p. 259, fig. 167.

6856 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 259, fig. 167.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899
On slab with *Azygograptus ? simplex,* p. 259, fig. 166.

6857 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 259, fig. 168.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.
On slab with type of *Azygograptus ? simplex,* p. 259, fig. 165.

6858 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 259, fig. 169.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6859 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 259, fig. 170.
Normanskill sh. Lansingburg, N. Y.
R. Ruedemann, coll. 1902

CACTOGRAPTUS Ruedemann

Cactograptus crassus Ruedemann

6860 HOLOTYPE *Cactograptus crassus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 197; p. 197, fig. 99, 100, 101; pl. 8, fig. 1.
Clinton sh. Clinton, N. Y.
R. Ruedemann, coll. 1907

CALLOGRAPTUS Hall

Callograptus compactus (Walcott)

6861 HYPOTYPE *Dendrograptus compactus* Walcott. Albany Inst., Tr. 1883. 10: 21 (advance sheets, 1879).
Callograptus compactus Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 146; p. 146, fig. 52; pl. 1, fig. 1.
Utica sh. Holland Patent, N. Y.
Rust purchase, 1890

Callograptus hepaticus (Ruedemann)

7335 COTYPE (original & counterpart) *Odontocaulis hepaticus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 174; p. 174, fig. 79, 80; pl. 1, fig. 6.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7336 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 174, fig. 81.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7337 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 1, fig. 7.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Callograptus cf. **minutus** Spencer var. **altus** Gurley

6862 HYPOTYPE *Callograptus minutus* var. *altus* (Gurley ms.) Bassler. U. S. N. M., Bul. 65. 1909. p. 15.
Callograptus cf. *minutus* var. *altus* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 20; p. 20, fig. 5.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

CALYPTOGRAPTUS Spencer

Calyptograptus cyathiformis Spencer

6863 HYPOTYPE *Calyptograptus cyathiformis* Spencer. Can. Nat., n. s. 1878. 8: 459.
Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 20; p. 20, fig. 6.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Calyptograptus micronematodes see **Desmograptus micronematodes**

Calyptograptus subretiformis see **Dictyonema subretiforme**

CHAUNOGRAPTUS Hall

Chaunograptus gemmatus Ruedemann

6864 HOLOTYPE *Chaunograptus gemmatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 226; p. 227, fig. 120; pl. 10, fig. 11.
Utica sh. Dolgeville, N. Y.
R. Ruedemann, coll.

Chaunograptus ? rectilinea Ruedemann

6865 HOLOTYPE *Chaunograptus ? rectilinea* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 227; p. 228, fig. 121; pl. 10, fig. 12.
Snake Hill sh. Van Schaick isl., Cohoes, N. Y.
R. Ruedemann, coll. 1900

Cladograpsus linearis see Pleurograptus linearis

CLIMACOGRAPTUS Hall

Climacograptus bicornis (Hall)

6866 HYPOTYPE *Graptolithus bicornis* Hall. Pal. N. Y. 1847. 1: 268.
Climacograptus bicornis Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 433, pl. A, fig. 2.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

6867 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 3.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6868 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 4.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6869 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 5.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6870 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 6.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899
On slab with type of *Climacograptus tridentatus,* pl. A, fig. 37.

6871 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 7.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883
On slab with types of *Climacograptus bicornis* var. *peltifer,* pl. A, fig. 18; *Climacograptus bicornis* var. *signum,* pl. A, fig. 28; p. 83, fig. 13.

6872 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 8.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. S. Cooper, coll. 1892

6873 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 9.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6874 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 10.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. S. Cooper, coll. 1892

6875 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 11.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6876 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 12.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1889

6877 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 13.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. S. Cooper, coll. 1892

6878 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 14.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6879 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 83, fig. 12.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6880 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 83, fig. 16.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6881 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 83, fig. 17.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6882 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 435, fig. 404; pl. 28, fig. 24.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

On slab with type of *Climacograptus tridentatus*, pl. A, fig. 36.

6883 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 435, fig. 405; pl. 28, fig. 26.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6884 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 25.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Climacograptus bicornis (Hall) var. peltifer Lapworth

6885 HYPOTYPE *Climacograptus bicornis* var. *peltifer* Lapworth. Cat. West. Scot. Foss. 1876. p. 6.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 82, pl. A, fig. 15.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1889

6886 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 16.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6887 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 17.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Climacograptus bicornis* var. *peltifer*, pl. A, fig. 24; *Climacograptus bicornis* var. *signum*, pl. A, fig. 27.

6888 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 18.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Climacograptus bicornis* var. *signum,* p. 83, fig. 13; pl. A, fig. 28; *Climacograptus bicornis,* pl. A, fig. 7.

6889 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 19.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1889

6890 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 20.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6891 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 21.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6892 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 22.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6893 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 23.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6894 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 24.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Climacograptus bicornis* var. *peltifer,* pl. A, fig. 17; *Climacograptus bicornis* var. *signum,* pl. A, fig. 27.

6895 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 25.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6896 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 26.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with type of *Dicranograptus spinifer* var. *arkansasensis,* pl. 23, fig. 6.

Climacograptus bicornis (Hall) var. signum Ruedemann

6897 COTYPE *Climacograptus bicornis* var. *signum* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 82, pl. A, fig. 27.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Climacograptus bicornis* var. *peltifer,* pl. A, fig. 17, 24.

6898 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 83, fig. 13; pl. A, fig. 28.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll.

On slab with types of *Climacograptus bicornis,* pl. A, fig. 7; *Climacograptus bicornis* var. *peltifer,* pl. A, fig. 18.

6899 COTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 29.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6900 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 83, fig. 14; pl. A, fig. 30.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6901 COTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 83, fig. 15; pl. A, fig. 31.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Climacograptus bicornis var. **tridentatus** see **Climacograptus tridentatus**

Climacograptus caudatus Lapworth

6909 HYPOTYPE *Climacograptus caudatus* Lapworth. Cat. West. Scot. Foss. 1876. p. 6.

Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 438; p. 439, fig. 406; pl. 28, fig. 17.

Snake Hill sh. Mechanicville, N. Y.

R. Ruedemann, coll. 1900

6910 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 18.

Snake Hill sh.

Dredged from river between Troy & Rensselaer, N. Y.

R. Ruedemann, coll. 1902

Climacograptus eximius Ruedemann

6911 COTYPE *Climacograptus putillus* (Hall) mut. *eximius* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 420; p. 420, fig. 378.

Normanskill sh. Lansingburg, N. Y.

R. Ruedemann, coll. 1900

6912 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 420, fig. 379.

Normanskill sh. Lansingburg, N. Y.

R. Ruedemann, coll. 1900

6913 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 420, fig. 380.

Normanskill sh. Lansingburg, N. Y.

R. Ruedemann, coll. 1900

On slab with type of *Corynoides gracilis*, pl. 13, fig. 12.

6914 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 420, fig. 381.

Normanskill sh. Lansingburg, N. Y.

R. Ruedemann, coll. 1900

6915 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 420, fig. 382; pl. 28, fig. 16b.

Normanskill sh. Lansingburg, N. Y.

R. Ruedemann, coll. 1900

6916 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 420, fig. 383; pl. 28, fig. 16a.
Normanskill sh. Glenmont, Albany co. N. Y.
R. Ruedemann, coll.

6917 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 420, fig. 384.
Normanskill sh. Lansingburg, N. Y.
R. Ruedemann, coll. 1900

Climacograptus lorrainensis Ruedemann

6918 HOLOTYPE *Climacograptus lorrainensis* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 63; p. 61, fig. 52; pl. 7, fig. 11.
Pulaski sh. Lorraine village, N. Y.
R. Ruedemann, coll.

6919 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 7, fig. 12.
Whetstone Gulf beds
Station 18 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

On slab with types of *Climacograptus lorrainensis,* p. 61, fig. 50; *Sowerbyella rugosa,* pl. 12, fig. 20.

6920 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 61, fig. 49.
Pulaski sh. Lorraine village, N. Y.
R. Ruedemann, coll.

6921 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 61, fig. 50.
Whetstone Gulf beds
Station 18 of Lorraine gulf section, N. Y.

On slab with types of *Climacograptus lorrainensis,* pl. 7, fig. 12; *Sowerbyella rugosa,* pl. 12, fig. 20.

6922 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 61, fig. 51.
Pulaski sh. Lorraine village, N. Y.
R. Ruedemann, coll.

Climacograptus modestus Ruedemann

6923 COTYPE *Climacograptus modestus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 432; p. 432, fig. 400.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6924 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 432, fig. 401.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. S. Cooper, coll. 1892

6925 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 432, fig. 402.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6926 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 432, fig. 403; pl. 28, fig. 30.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

Climacograptus parvus Hall

6927 HYPOTYPE *Climacograptus parvus* Hall. Can. G. S., Can. Organic Remains, Dec. 2. 1865. p. 57 (nom. nud.).
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 426; p. 90, fig. 24.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6928 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 91, fig. 25; p. 426, fig. 391.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 15, fig. 1.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6929 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 91, fig. 26.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6930 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 91, fig. 27.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6931 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 91, fig. 28.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 15, fig. 3.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6932 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 94, fig. 33.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6933 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 94, fig. 35; pl. 28, fig. 19.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6934 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 426, fig. 389.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo. coll. 1883

6935 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 426, fig. 390.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo. coll. 1883

6936 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 426, fig. 393.
Normanskill sh. Glenmont, Albany co. N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

6937 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 20.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with type of *Lasiograptus (Hallograptus) mucronatus,* pl. 29, fig. 10.

6938 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 21.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 15, fig. 8.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6939 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 22.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Counterpart on slab with types of *Lasiograptus (Hallograptus) mucronatus,* p. 480, fig. 457; pl. 29, fig. 11.

6940 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 23.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 15, fig. 12.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6941 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 21; p. 21, fig. 9.
Normanskill sh. Kenwood, Albany co. N. Y.
Edwin J. Stein, coll.

Climacograptus parvus see Glossograptus ciliatus

Climacograptus putillus see Climacograptus pygmaeus

Climacograptus putillus see Climacograptus strictus

Climacograptus putillus mut. eximius see Climacograptus eximius

Climacograptus pygmaeus Ruedemann

6942 HOLOTYPE *Climacograptus putillus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 415; p. 416, fig. 376.
Climacograptus pygmaeus Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 63.
Utica sh. Fulmer creek near Mohawk, N. Y.
R. Ruedemann, coll.

Climacograptus scalaris (Hisinger) var. annulatus Ruedemann

6943 COTYPE *Climacograptus scalaris* var. *annulatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 421; p. 422, fig. 385, 386.
Clinton (age) ss. Aroostook, Me.
O. O. Nylander, coll.

6944 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 422, fig. 387.
Clinton (age) ss. Aroostook, Me.
O. O. Nylander, coll.

6945 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 32.
Clinton (age) ss. Aroostook, Me.
O. O. Nylander, coll.

Climacograptus scharenbergi Lapworth

6946 HYPOTYPE *Climacograptus scharenbergi* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 248; p. 430 fig. 396; pl. 28, fig. 31.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6947 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 430, fig. 398, 399.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll.

Climacograptus spiniferus Ruedemann

6948 COTYPE *Climacograptus typicalis* Hall mut. *spinifer* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 411; p. 412, fig. 363.
Snake Hill sh. Hudson Falls, N. Y.
On slab with type of *Climacograptus spiniferus,* pl. 28, fig. 9.

6949 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 9.
Snake Hill sh. Hudson Falls, N. Y.
On slab with type of *Climacograptus spiniferus,* p. 412, fig. 363.

Climacograptus strictus Ruedemann

6950 COTYPE *Climacograptus putillus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 415; p. 416, fig. 372.
Climacograptus strictus Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 62.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899
On slab with type of *Glossograptus quadrimucronatus* var. *cornutus,* pl. 27, fig. 8.

6951 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 416, fig. 373.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899

6952 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 14.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899

6953 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 416, fig. 371; pl. 28, fig. 15.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899

Climacograptus tridentatus Lapworth

6902 HYPOTYPE *Climacograptus bicornis* var. *tridentatus* Lapworth. Cat. West. Scot. Foss. 1876. p. 6.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 83, pl. A, fig. 32.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6903 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 33.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.
On slab with types of *Glossograptus whitfieldi*, pl. 26, fig. 17; *Retiograptus geinitzianus*, pl. 31, fig. 14.

6904 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 34.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll.

6905 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 35.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6906 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 36.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.
On slab with type of *Climacograptus bicornis*, p. 435, fig. 404; pl. 28, fig. 24.

6907 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 37.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899
On slab with type of *Climacograptus bicornis*, pl. A, fig. 6.

6908 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. A, fig. 38.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Climacograptus typicalis Hall

6954 HYPOTYPE *Climacograptus typicalis* Hall. Can. G. S., Can. Organic Remains, dec. 2. 1865. p. 27.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 407; p. 409, fig. 356.
Utica sh. Holland Patent, N. Y.
Rust purchase

On slab with types of *Climacograptus typicalis,* p. 409, fig. 358; pl. 28, fig. 6.

6955 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 409, fig. 358.
Utica sh. Holland Patent, N. Y.
Rust purchase

On slab with types of *Climacograptus typicalis,* p. 409, fig. 356; pl. 28, fig. 6.

6956 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 6.
Utica sh. Holland Patent, N. Y.
Rust purchase

On slab with types of *Climacograptus typicalis,* p. 409, fig. 356, 358.

Climacograptus typicalis see Climacograptus typicalis mut. posterus

Climacograptus typicalis Hall mut. posterus Ruedemann

6957 HOLOTYPE *Climacograptus typicalis* mut. *posterus* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 60; p. 61, fig. 47; pl. 7, fig. 14.
Atwater Creek sh.
Station 1 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

6958 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 61, fig. 48.
Atwater Creek sh.
Station 2 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

6959 PARATYPE *Climacograptus typicalis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 407; p. 409, fig. 362; pl. 28, fig. 7.
Deer River sh. Lee's gulf, Lewis co. N. Y.

Climacograptus typicalis mut. **spinifer** see **Climacograptus spiniferus**

Climacograptus ultimus Ruedemann

6960 COTYPE *Climacograptus ultimus* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 37; p. 37, fig. 24.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

On slab with types of *Climacograptus ultimus,* p. 37, fig. 25; pl. 12, fig. 3, 4.

6961 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 37, fig. 25.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

On slab with types of *Climacograptus ultimus,* p. 37, fig. 24; pl. 12, fig. 3, 4.

6962 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 12, fig. 3.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

On slab with types of *Climacograptus ultimus,* p. 37, fig. 24, 25; pl. 12, fig. 4.

6963 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 12, fig. 4.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

On slab with types of *Climacograptus ultimus,* p. 37, fig. 24, 25; pl. 12, fig. 3.

Coenograptus exilis see **Nemagraptus exilis**

Coenograptus gracilis see **Nemagraptus gracilis**

Coenograptus surcularis see **Nemagraptus gracilis** var. **surcularis**

CORYNOIDES Nicholson

Corynoides calicularis (in error) see Corynoides curtus mut. pristinus

Corynoides calicularis Nicholson var. **americana** Ruedemann

6964 COTYPE *Corynoides curtus* (in error) Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 240; p. 240, fig. 142.
Corynoides calicularis var. *americana* Ruedemann. G. S. A., Mem. 19. 1947. p. 359.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899
On slab with types of *Corynoides calicularis* var. *americana,* pl. 13, fig. 4, 20.

6965 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 240, fig. 143, 144.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899

6966 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 4.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899
On slab with types of *Corynoides calicularis* var. *americana,* p. 240, fig. 142; pl. 13, fig. 20.

6967 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 17.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 58, fig. 26.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899

6968 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 18.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 58, fig. 28.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899

6969 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13. fig. 19.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 58, fig. 29.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899

6970 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 20.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899
On slab with types of *Corynoides calicularis* var. *americana,* p. 240, fig. 142; pl. 13, fig. 4.

6971 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 21.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 58, fig. 27.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke & R. Ruedemann, coll. 1899

Corynoides comma Ruedemann

6972 COTYPE *Corynoides curtus* var. *comma* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 242; p. 242, fig. 145.
Snake Hill sh. Mechanicville, N. Y.
R. Ruedemann, coll. 1899
On slab with types of *Corynoides comma,* p. 242, fig. 147, 148; pl. 13, fig. 22, 24.

6973 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 242, fig. 146; pl. 13, fig. 5, 23.
Snake Hill sh. Mechanicville, N. Y.
R. Ruedemann, coll. 1899

6974 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 242, fig. 147.
Snake Hill sh. Mechanicville, N. Y.
R. Ruedemann, coll. 1899
On slab with types of *Corynoides comma,* p. 242, fig. 145, 148; pl. 13, fig. 22, 24.

6975 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 242, fig. 148.
Snake Hill sh. Mechanicville, N. Y.
R. Ruedemann, coll. 1899
On slab with types of *Corynoides comma,* p. 242, fig. 145, 147; pl. 13, fig. 22, 24.

6976 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 22.
Snake Hill sh. Mechanicville, N. Y.
R. Ruedemann, coll. 1899
On slab with types of *Corynoides comma,* p. 242, fig. 145, 147, 148; pl. 13, fig. 24.

6977 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 24.
Snake Hill sh. Mechanicville, N. Y
R. Ruedemann, coll. 1899

On slab with types of *Corynoides comma,* p. 242, fig. 145, 147, 148; pl. 13, fig. 22.

Corynoides curtus (in error) see **Corynoides calicularis** var. **americana**

Corynoides curtus var. **comma** see **Corynoides comma**

Corynoides curtus Lapworth mut. **pristinus** Ruedemann

6978 COTYPE *Corynoides calicularis* (in error) Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 234; p. 91, fig. 29.
Corynoides curtus mut. *pristinus* Ruedemann. G. S. A., Mem. 19. 1947. p. 360.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6979 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 91, fig. 30.
Corynoides Ruedemann. G. S. A., Mem. 2. 1934. pl. 15, fig. 2.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6980 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 235, fig. 127.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Corynoides curtus* mut. *pristinus,* pl. 13, fig. 6-8.

6981 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 235, fig. 128.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6982 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 235, fig. 129.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6983 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 235, fig. 131.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883
On slab with types of *Dicellograptus sextans,* pl. 19, fig. 1; *Azygograptus ? simplex,* p. 259, fig. 164.

6984 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 1.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 58, fig. 30.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6985 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 6.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 58, fig. 31.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883
On slab with types of *Corynoides curtus* mut. *pristinus,* p. 235, fig. 127; pl. 13, fig. 7, 8.

6986 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 7.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 58, fig. 32.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883
On slab with types of *Corynoides curtus* mut. *pristinus,* p. 235, fig. 127; pl. 13, fig. 6, 8.

6987 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 8.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 58, fig. 33.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883
On slab with types of *Corynoides curtus* mut. *pristinus,* p. 235, fig. 127; pl. 13, fig. 6, 7.

Corynoides gracilis Hopkinson

6988 HYPOTYPE *Corynoides gracilis* Hopkinson. Geol. Mag. 1872 9: 502.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 237; p. 238, fig. 134.
Normanskill sh. Lansingburg, N. Y.
R. Ruedemann, coll. 1900

6989 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 2.
Snake Hill sh. Hudson Falls, Washington co. N. Y.
R. Ruedemann, coll. 1905

6990 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 12.
Normanskill sh. Lansingburg, N. Y.
R. Ruedemann, coll. 1900

On slab with type of *Climacograptus eximius,* p. 420, fig. 380.

6991. HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 15.
Snake Hill sh. Ruscher's quarry, Troy, N. Y.
R. Ruedemann, coll. 1899

6992 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 238, fig. 135; pl. 13, fig. 16.
Normanskill sh. Lansingburg, N. Y.
R. Ruedemann, coll. 1900

Corynoides gracilis Hopkinson mut. **perungulatus** Ruedemann

6993. COTYPE *Corynoides gracilis* mut. *perungulatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 239; p. 239, fig. 136.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Corynoides gracilis* mut. *perungulatus,* p. 239, fig. 139; pl. 13, fig. 9, 11.

6994 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 239, fig. 137.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6995 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 239, fig. 138.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6996 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 239, fig. 139.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Corynoides gracilis* mut. *perungulatus,* p. 239, fig. 136; pl. 13, fig. 9, 11.

6997 COTYPE Ruedemann. N. Y. S. M., Mem. **11**. 1908. pl. 13, fig. 9.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Corynoides gracilis* mut. *perungulatus,* p. 239, fig. 136, 139; pl. 13, fig. 11.

6998 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 10.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

6999 COTYPE Ruedemann. N. Y. S. M., Mem. **11**. 1908. pl. 13, fig. 11.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Corynoides gracilis* mut. *perungulatus,* p. 239, fig. 136, 139; pl. 13, fig. 9.

7000 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13. fig. 13.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7001 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 14.
Normanskill sh. Speigletown, near Troy, N. Y.
R. Ruedemann, coll. 1902

Corynoides ultimus Ruedemann

7002 COTYPE *Corynoides ultimus* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 47; p. 47, fig. 29.
Up. Utica sh. Station 5 of Ohisa creek section, N. Y.
R. Ruedemann, coll.

On slab with types of *Corynoides ultimus,* p. 47, fig. 31, 32; pl. 5, fig. 1.

7003 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 47, fig. 30.
Up. Utica sh. Station 5 of Ohisa creek section, N. Y.
R. Ruedemann, coll.

On slab with type of *Corynoides ultimus,* p. 47, fig. 33.

7004 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 47, fig. 31.
Up. Utica sh. Station 5 of Ohisa creek section, N. Y.
R. Ruedemann, coll.
On slab with types of *Corynoides ultimus,* p. 47, fig. 29, 32; pl. 5, fig. 1.

7005 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 47, fig. 32.
Up. Utica sh. Station 5 of Ohisa creek section, N. Y.
R. Ruedemann, coll.
On slab with types of *Corynoides ultimus,* p. 47, fig. 29, 31; pl. 5, fig. 1.

7006 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 47, fig. 33.
Up. Utica sh. Station 5 of Ohisa creek section, N. Y.
R. Ruedemann, coll.
On slab with type of *Corynoides ultimus,* p. 47, fig. 30.

7007 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 5, fig. 1.
Up. Utica sh. Station 5 of Ohisa creek section, N. Y.
R. Ruedemann, coll.
On slab with types of *Corynoides ultimus,* p. 47, fig. 29, 31, 32.

CRYPTOGRAPTUS LAPWORTH

Cryptograptus tricornis (Carruthers)

7008 HYPOTYPE *Diplograptus tricornis* Carruthers. Roy. Philos. Soc. Edinburgh, Tr. 1858. 1:468.
Cryptograptus tricornis Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 443; p. 72, fig. 7; p. 445, fig. 417.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7009 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 445, fig. 411.
Normanskill sh. Speigletown, near Troy, N. Y.
R. Ruedemann, coll. 1902
On slab with type of *Cryptograptus tricornis,* p. 445, fig. 416.

7010 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 445, fig. 412.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7011 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 445, fig. 413.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with type of *Dicranograptus nicholsoni* var. *diapason,* pl. 21, fig. 3.

7012 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 445, fig. 414.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7013 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 445, fig. 415.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7014 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 445, fig. 416.
Normanskill sh. Speigletown, near Troy, N. Y.
R. Ruedemann, coll. 1902

On slab with type of *Cryptograptus tricornis,* p. 445, fig. 411.

7015 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 1.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7016 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 2.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7017 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 3.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7018 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 4.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Cryptograptus tricornis (Carruthers) mut. **insectiformis** Ruedemann

7019 COTYPE *Cryptograptus tricornis* mut. *insectiformis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 448; p. 448, fig. 419.
Snake Hill sh. Van Schaick isl., Cohoes, N. Y.
R. Ruedemann, coll. 1900

On slab with type of *Cryptograptus tricornis* mut. *insectiformis,* p. 448, fig. 421.

7020 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 448, fig. 420.
Snake Hill sh. Van Schaick isl., Cohoes, N. Y.
R. Ruedemann, coll. 1900

7021 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 448, fig. 421.
Snake Hill sh. Van Schaick isl., Cohoes, N. Y.
R. Ruedemann, coll. 1900

On slab with type of *Cryptograptus tricornis* mut. *insectiformis,* p. 448, fig. 419.

7022 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 448, fig. 422.
Snake Hill sh. Van Schaick isl., Cohoes, N. Y.
R. Ruedemann, coll. 1900

7023 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 28, fig. 5.
Snake Hill sh. Van Schaick isl., Cohoes, N. Y.
R. Ruedemann, coll. 1900

CYCLOGRAPTUS Spencer

Cyclograptus rotadentatus Spencer

7024 HOMEOTYPE *Cyclograptus rotadentatus* Spencer. Can. Nat., n.s. 1882. 10:165 (nom. nud.).

Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 184; p. 185, fig. 92; pl. 2, fig. 5.
Clinton beds. Clinton, N. Y.

DENDROGRAPTUS Hall

Dendrograptus compactus see **Callograptus compactus**

Dendrograptus flexuosus Hall

7025 HYPOTYPE (original & counterpart) *Dendrograptus flexuosus* Ruedemann. N. Y. S. M., Mem. 7. 1904. p. 579, pl. 4, fig. 10.
Deepkill sh. Deep kill, N. Y.
R. Ruedemann & H. S. Mattimore, coll. 1901

Dendrograptus rectus Ruedemann

7026 HOLOTYPE (original & counterpart) *Dendrograptus rectus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 145; p. 145, fig. 51; pl. 8, fig. 2.
Clinton beds Clinton, N. Y.
E. O. Ulrich, coll. 1907

Dendrograptus simplex see **Mastigograptus simplex**

Dendrograptus tenuiramosus see **Mastigograptus tenuiramosus**

DESMOGRAPTUS Hopkinson

Desmograptus becraftensis Ruedemann

7027 HOLOTYPE *Desmograptus becraftensis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 179; p. 180, fig. 86; pl. 5, fig. 1.
New Scotland beds Becraft Mt., Hudson, N. Y.
H. C. Wardell, coll. 1905

Desmograptus micronematodes (Spencer)

7028 HYPOTYPE *Calyptograptus micronematodes* Spencer. Can. Nat., n.s. 1882. 10:165 (nom. nud.).
Desmograptus micronematodes Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 21; p. 21, fig. 7.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7029 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 21, fig. 8.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7030 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 21, fig. 9.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7031 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 21, fig. 10.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7032 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 21, fig. 11.
Clinton ss. Niagara Falls, N. Y.
E. Reinhard, coll.

Desmograptus tenuiramosus Ruedemann

7033 HOLOTYPE *Desmograptus tenuiramosus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 177; p. 178, fig. 84, 85; pl. 1, fig. 2.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Desmograptus vandelooi Ruedemann

7034 HOLOTYPE *Desmograptus vandelooi* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 181; p. 182, fig. 87, 88; pl. 5, fig. 2.
Hamilton sh. Hemlock creek, Ontario co. N. Y.
C. A. White & C. Van Deloo, coll. 1860

DICELLOGRAPTUS Hopkinson

Dicellograptus divaricatus (Hall)

7035 HYPOTYPE (original & counterpart) *Graptolithus divaricatus* Hall. Pal. N. Y. 1859. 3:513.

Dicellograptus divaricatus Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 296, pl. 18, fig. 4.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

Dicellograptus divaricatus (Hall) var. bicurvatus Ruedemann

7036 COTYPES (original & counterpart) *Dicellograptus divaricatus* var. *bicurvatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 300; p. 300, fig. 216; pl. 18, fig. 8.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

On slab with types of *Nemagraptus gracilis* var. *surcularis,* pl. 17, fig. 2; *Lasiograptus bimucronatus,* p. 482, fig. 462.

Dicellograptus divaricatus (Hall) var. rectus Ruedemann

7037 HOLOTYPE *Dicellograptus divaricatus* var. *rectus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 299; p. 299, fig. 215; pl. 18, fig. 7.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

Dicellgraptus divaricatus (Hall) var. salopiensis Elles & Wood

7038 HYPOTYPE *Dicellograptus divaricatus* var. *salopiensis* Elles & Wood. Mon. Brit. Grapt. 1904. 4:145.

Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 300; p. 300, fig. 218; pl. 18, fig. 5.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

7039 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 300, fig. 219.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

Dicellograptus gurleyi Lapworth

7040 HYPOTYPE *Dicellograptus gurleyi* (Lapworth ms.) Gurley. Jour. Geol. 1896. 4:70.

Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 303; p. 103, fig. 42; p. 304, fig. 224.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with type of *Glossograptus ciliatus,* p. 381, fig. 333.

7041 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 105, fig. 45.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7042 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 106, fig. 46; p. 304, fig. 227.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7043 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 292, fig. 206.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7044 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 304, fig. 228.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7045 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 19, fig. 7.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7046 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 19, fig. 8.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7047 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 19, fig. 9.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Dicellograptus intortus Lapworth

7048 HYPOTYPE *Dicellograptus intortus* Lapworth. Ann. and Mag. Nat. Hist., 5th ser. 1880. 5:161.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 302; p. 302, fig. 222.
Normanskill sh. Speigletown, near Troy, N. Y.
R. Ruedemann, coll. 1900

Dicellograptus mensurans Ruedemann

7049 COTYPES *Dicellograptus mensurans* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 295; p. 295, fig. 210, 211; pl. 18, fig. 2.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

On slab with type of *Nemagraptus exilis* var. *linearis,* pl. 17, fig. 10.

Dicellograptus moffatensis (Carruthers) var. alabamensis Ruedemann

7050 COTYPE *Dicellograptus moffatensis* var. *alabamensis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 310; p. 311, fig. 234.
Athens sh. Pratt's Ferry, Bibb co. Ala.
Prof. E. A. Smith exchange

7051 COTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 311, fig. 235; pl. 20, fig. 1.
Athens sh. Pratt's Ferry, Bibb co. Ala.
Prof. E. A. Smith exchange

7052 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 311, fig. 236; pl. 20, fig. 2.
Athens sh. Pratt's Ferry, Bibb co. Ala.
Prof. E. A. Smith exchange

Dicellograptus sextans (Hall)

7053 HYPOTYPE *Graptolithus sextans* Hall. Pal. N. Y. 1847. 1:273.

Dicellograptus sextans Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 306; p. 307, fig. 229.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7054 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 307, fig. 230.
Normanskill sh. Speigletown, near Troy, N. Y.
R. Ruedemann, coll. 1902

7055 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 19, fig. 1.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with types of *Corynoides curtus* mut. *pristinus,* p. 235, fig. 131; *Azygograptus ? simplex,* p. 259, fig. 164.

Dicellograptus sextans (Hall) var. perexilis Ruedemann

7056 HOLOTYPE *Dicellograptus sextans* var. *perexilis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 310, pl. 19, fig. 2.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7057 PARATYPE Ruedemann. N Y. S. M., Mem. 11. 1908. p. 310, fig. 233.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

Dicellograptus sextans (Hall) var. tortus Ruedemann

7058 HOLOTYPE *Dicellograptus sextans* var. *tortus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 309; p. 309, fig. 232.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.

Dicellograptus smithi Ruedemann

7059 HOLOTYPE *Dicellograptus smithi* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 313; p. 109, fig. 48; p. 314, fig. 237; pl. 19, fig. 4.
Athens sh. Pratt's Ferry, Bibb co. Ala.
Prof. E. A. Smith exchange

7060 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 314, fig. 238.
Athens sh. Pratt's Ferry, Bibb co. Ala.
Prof. E. A. Smith exchange

7061 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 19, fig. 3.
Athens sh. Pratt's Ferry, Bibb co. Ala.
Prof. E. A. Smith exchange

7062 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 19, fig. 5.
Athens sh. Pratt's Ferry, Bibb co. Ala.
Prof. E. A. Smith exchange
On slab with type of *Dicellograptus smithi,* pl. 19, fig. 6.

7063 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 19, fig. 6.
Athens sh. Pratt's Ferry, Bibb co. Ala.
Prof. E. A. Smith exchange
On slab with type of *Dicellograptus smithi,* pl. 19, fig. 5.

DICRANOGRAPTUS Hall

Dicranograptus contortus Ruedemann

7064 COTYPE *Dicranograptus contortus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 337; p. 337, fig. 275; pl. 23, fig. 9.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.
On slab with types of *Dicranograptus contortus,* p. 337, fig. 276, 277, 278.

7065 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 337, fig. 276; pl. 23, fig. 9.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.
On slab with types of *Dicranograptus contortus,* p. 337, fig. 275, 277, 278.

7066 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 337, fig. 277; pl. 23, fig. 9.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.
On slab with types of *Dicranograptus contortus,* p. 337, fig. 275, 276, 278.

7067 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 337, fig. 278; pl. 23, fig. 9.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.
On slab with types of *Dicranograptus contortus,* p. 337, fig. 275, 276, 277.

Dicranograptus furcatus (Hall)

7068 HYPOTYPE *Graptolithus furcatus* Hall. Pal. N. Y. 1847. 1:273.
Dicranograptus furcatus Ruedemann. N. Y. S. M., Mem. 11, 1908. p. 334; p. 335, fig. 270.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.

7069 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 335, fig. 271; pl. 23, fig. 7.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.

7070 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 335, fig. 272.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Dicranograptus furcatus (Hall) var. **exilis** Ruedemann

7071 HOLOTYPE (original and counterpart) *Dicranograptus furcatus* var. *exilis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 337; p. 337, fig. 273, 274; pl. 23, fig. 8.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.

Dicranograptus nicholsoni Hopkinson

7072 HYPOTYPE *Dicranogrpatus nicholsoni* Hopkinson. Geol. Mag. 1870. 7:357.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 317; p. 318, fig. 241.
Snake Hill sh. Saratoga lake, N. Y.
C. D. Walcott and C. Van Deloo, coll.

7073 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 318, fig. 242; pl. 21, fig. 1.
Snake Hill sh. Saratoga lake, N. Y.
C. D. Walcott and C. Van Deloo, coll.

7074 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 20, fig. 3.
Snake Hill sh. Saratoga lake, N. Y.
C. D. Walcott and C. Van Deloo, coll.

Dicranograptus nicholsoni Hopkinson var. **diapason** Gurley

7075 HYPOTYPE *Dicranograptus nicholsoni* var. *diapason* Gurley. Jour. Geol. 1896. 4:73.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 322; p. 322, fig. 252.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7076 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 322, fig. 253.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7077 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 322, fig. 254.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7078 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 21, fig. 3.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with type of *Cryptograptus tricornis*, p. 445, fig. 413.

7079 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 21, fig. 4.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1889

7080 HYPOTYPE (original and counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 21, fig. 5.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Dicranograptus nicholsoni Hopkinson var. **parvangulus** Gurley

7081 HYPOTYPE *Dicranograptus nicholsoni* var. *parvangulus* Gurley. Ark. Geol. Surv., Ann. Rep't 1892. 3:417.

Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 320; p. 71, fig. 2; p. 321, fig. 248.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7082 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 321, fig. 246.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7083 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 321, fig. 247.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.

7084 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 21, fig. 2.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

Dicranograptus nicholsoni Hopkinson var. parvulus Ruedemann

7085 COTYPE *Dicranograptus nicholsoni* var. *parvulus* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 78; p. 79, fig. 17.
Canajoharie sh. Morphy's creek near Pattersonville, N. Y.
R. Ruedemann, coll.

7086 COTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 79, fig. 18.
Canajoharie sh. Morphy's creek near Pattersonville, N. Y.
R. Ruedemann, coll.

Dicranograptus ramosus see Dicranograptus spinifer

Dicranograptus spinifer Lapworth

7088 HYPOTYPE *Dicranograptus spinifer* Lapworth. Geol. Soc. London, Quart. Jour. 1882. 38:610.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 330; p. 331, fig. 260.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7089 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 331, fig. 261.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7090 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 331, fig. 262.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. F. Cooper, coll. 1892

7091 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 331, fig. 263; pl. 23, fig. 3.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7092 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 22, fig. 1.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. F. Cooper, coll. 1892

7087 HYPOTYPE *Dicranograptus ramosus* Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 23, fig. 1.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. F. Cooper, coll. 1892

Dicranograptus spinifer Lapworth var. **arkansasensis** Gurley

7093 HYPOTYPE (original and counterpart) *Dicranograptus arkansasensis* Gurley. Ark. Geol. Surv., Ann. Rep't 1892. 3:416.
Dicranograptus spinifer var. *geniculatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 333; p. 333, fig. 265, 266; pl. 23, fig. 4.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7094 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 333, fig. 267; pl. 23, fig. 5.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7095 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 23, fig. 6.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with type of *Climacograptus bicornis* var. *peltifer,* pl. A, fig. 26.

Dicranograptus spinifer var. **geniculatus** see **Dicranograptus spinifer** var. **arkansasensis**

DICTYONEMA Hall

Dictyonema arbusculum (Ulrich)

7096 HYPOTYPE *Inocaulis arbuscula* Ulrich. Cin. Soc. N. H., Jour. 1879. 2:28.
Dictyonema arbuscula Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 77; p. 77, fig. 13.
Indian Ladder beds Indian Ladder, Albany co. N. Y.
R. Ruedemann, coll.

7097 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 77, fig. 14, 15; pl. 2, fig. 15.
Indian Ladder beds Indian Ladder, Albany co. N. Y.
R. Ruedemann, coll.

Dictyonema areyi Gurley

7098 COTYPE *Dictyonema areyi* (Gurley ms.) Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 164; p. 164, fig. 73; pl. 4, fig. 2.
Rochester sh. Rochester, N. Y.
A. L. Arey purchase

Dictyonema crassibasale Gurley

7099 HYPOTYPE *Dictyonema crassibasale* (Gurley ms.) Bassler. U. S. N. M. Bul. 65. 1909. p. 19.

Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 22; p. 23, fig. 12.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7100 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 23, fig. 13.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with type of *Dictyonema tenellum,* p. 26, fig. 17, 18.

7101 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 1, fig. 1.
Lockport ls. Hamilton, Ont. Can.

Dictyonema crassum Girty

7102 HYPOTYPE (original & counterpart) *Dictyonema crassum* Girty. N. Y. S. Geol., Ann. Rep't 14. 1895. p. 288.

Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 165, pl. 5, fig. 3.
New Scotland ls. Catskill, N. Y.
R. W. Jones, don. 1899

Dictyonema desmoides Gurley

7103 HOLOTYPE *Dictyonema desmoides* (Gurley ms.) Bassler. U. S. N. M. Bul. 65. 1909. p. 34; p. 35, fig. 41; pl. 4, fig. 3.
Lockport ls. Hamilton, Ont. Can.

Dictyonema expansum Spencer

7104 HYPOTYPE (original and counterpart) *Dictyonema expansum* Spencer. St Louis Acad. Sci., Tr. 1886. v. 4, no. 4, p. 575.

Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 24; p. 24, fig. 14.

Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Dictyonema filiramus Gurley

7105 HYPOTYPE *Dictyonema filiramus* (Gurley ms.) Bassler. U. S. N. M. Bul. 65. 1909. p. 34.

Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 24; p. 24, fig. 15.

Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Dictyonema furciferum see Airograptus furciferus

Dictyonema gracile Hall

7106 HYPOTYPE *Dictyonema gracilis* Hall. Pal. N. Y. 1852. 2:175.

Dictyonema gracile Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 157; p. 158, fig. 66.

Lockport ls. Hamilton, Ont. Can.
J. Schuler exchange

7107 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 158, fig. 67; pl. 1, fig. 5.

Rochester sh. Middleport, N. Y.
J. M. Clarke and D. D. Luther, coll. 1899

Dictyonema infundibuliforme Ruedemann

7108 HOLOTYPE *Dictyonema infundibuliforme* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 24; p. 25, fig. 16.

Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Dictyonema multiramosum Ruedemann

7109 HOLOTYPE *Dictyonema multiramosum* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 78; p. 78, fig. 16; pl. 2, fig. 16.
Schenectady beds
Rotterdam junction, Schenectady co. N. Y.
R. Ruedemann, coll.

Dictyonema polymorphum see Reticulograptus polymorphus

Dictyonema retiforme (Hall)

7112 HYPOTYPE *Gorgonia? reteformis* Hall. Geol. N. Y., Rep't 4th Dist. 1843. p. 115.
Dictyonema retiforme Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 155; p. 156, fig. 64; pl. 3, fig. 1.
Rochester sh. Lockport, N. Y.
Simons collection

Dictyonema scalariforme Foerste

7113 HYPOTYPE *Dictyonema scalariforme* Foerste. Dension Univ., Sci. Lab. Bul. 1887. v. 2, pt 1, p. 108.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 153; p. 154, fig. 63; pl. 1, fig. 3.
Clinton sh. Clinton, N. Y.
C. A. Hartnagel, coll. 1907

Dictyonema spiniferum Ruedemann

7114 HOLOTYPE *Dictyonema spiniferum* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 151, pl. 1, fig. 4.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7115 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 151, fig. 55.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7116 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 151, fig. 56.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Dictyonema subretiforme (Spencer)

7117 HYPOTYPE *Calyptograptus subretiformis* Spencer. Can. Nat., n.s. 1878. 8: 460.

Dictyonema subretiforme Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 162, pl. 2, fig. 1.

Rochester sh. Middleport, N. Y.

Lawrence La Forge, coll. 1900

7118 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 2, fig. 2.

Rochester sh. Middleport, N. Y.

J. M. Clarke & D. D. Luther, coll. 1899

Dictyonema tenellum Spencer

7119 HYPOTYPE *Dictyonema tenella* Spencer. Can. Nat., n.s. 1878. 8: 458.

Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 26; p. 26, fig. 17, 18.

Gasport lens of Lockport ls. Gasport, N. Y.

E. Reinhard, coll.

On slab with type of *Dictyonema crassibasale,* p. 23, fig. 13.

DIDYMOGRAPTUS McCoy

Didymograptus sagitticaulis Gurley

7120 HYPOTYPE *Didymograptus sagitticaulis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 247; p. 249, fig. 151, 152.

Normanskill sh. Kenwood, Albany, N. Y.

C. Van Deloo, coll. 1883

Didymograptus serratulus (Hall)

7121 COTYPE *Graptolithus serratulus* Hall. Pal. N. Y. 1847. 1: 274, pl. 74, fig. 5a.

Didymograptus serratulus Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 251; p. 252, fig. 158, 158; pl. 14, fig. 4.

Normanskill sh. Kenwood, Albany co. N. Y.

R. P. Whitfield & C. Van Deloo, coll.

On slab with type of *Didymograptus subtenuis,* p. 254, fig. 160, 161; pl. 14, fig. 2. Counterpart in A. M. N. H.

7122 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 252, fig. 157.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.

Didymograptus serratulus (Hall) var. juvenalis Ruedemann

7123 HOLOTYPE *Didymograptus serratulus* var. *juvenalis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 253; p. 252, fig. 156.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield & C. Van Deloo, coll.

Didymograptus subtenuis (Hall)

7124 COTYPE *Graptolithus tenuis* Hall. Pal. N. Y. 1847. v. 1, pl. 74, fig. 2c.
Didymograptus subtenuis Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 253; p. 254, fig. 160, 161; pl. 14, fig. 2.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield & C. Van Deloo, coll.
On slab with type of *Didymograptus serratulus,* p. 252, fig. 158, 159; pl. 14, fig. 4. Counterpart in A. M. N. H.

7125 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 105, fig. 43.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899
On slab with type of *Didymograptus subtenuis,* p. 105, fig. 44.

7126 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 105, fig. 44.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899
On slab with type of *Didymograptus subtenuis,* p. 105, fig. 43.

DIPLOGRAPTUS McCoy

Diplograptus (Orthograptus) (?) sp.

7127 HYPOTYPE *Orthograptus (?)* sp. Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 38; p. 37, fig. 26; pl. 12, fig. 5.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Diplograptus amplexicaulis see **Diplograptus (Amplexograptus) amplexicaulis**

Diplograptus amplexicaulis var. pertenuis see **Diplograptus (Amplexograptus) amplexicaulis** var. pertenuis

Diplograptus (Amplexograptus) amplexicaulis (Hall)

7128 HYPOTYPE *Graptolithus amplexicaule* Hall. Pal. N. Y. 1847. 1: 79.

Diplograptus amplexicaulis Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 361; p. 98, fig. 40; p. 363, fig. 302; pl. 25, fig. 11.
Trenton ls. Middleville, N. Y.

7129 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 363, fig. 303.
Trenton ls. Middleville, N. Y.

7130 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 363, fig. 304; pl. 25, fig. 13.
Trenton ls. Middleville, N. Y.
J. W. Hall, coll.

7131 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 363, fig. 305.
Snake Hill sh. Hudson Falls, N. Y.
R. Ruedemann, coll. 1905

7132 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 363, fig. 306; pl. 25, fig. 12.
Snake Hill sh. Hudson Falls, N. Y.
R. Ruedemann, coll. 1905

7133 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 25, fig. 10.
Snake Hill sh. Hudson Falls, N. Y.
C. Schuchert, don. 1893

Diplograptus (Amplexograptus) amplexicaulis (Hall) var. pertenuis Ruedemann

7134 COTYPE *Diplograptus amplexicaulis* var. *pertenuis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 365; p. 365, fig. 308; pl. 25, fig. 15.
Snake Hill sh. Ruscher's quarry, Troy, N. Y.
R. Ruedemann, coll. 1899

On slab with type of *Diplograptus (Amplexograptus) amplexicaulis* var. *pertenuis,* p. 365, fig. 310; pl. 25, fig. 16.

7135 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 365, fig. 310; pl. 25, fig. 16.
Snake Hill sh. Ruscher's quarry, Troy, N. Y.
R. Ruedemann, coll. 1899

On slab with type of *Diplograptus (Amplexograptus) amplexicaulis* var. *pertenuis,* p. 365, fig. 308; pl. 25, fig. 15.

Diplograptus (Glyptograptus) angustifolius (Hall)

7136 HYPOTYPE *Graptolithus angustifolius* Hall. Pal. N. Y. 1859. 3: 515.

Diplograptus (Glyptograptus) angustifolius Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 366; p. 72, fig. 5; p. 368, fig. 312.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. F. Cooper, coll. 1892

7137 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 368, fig. 313.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7138 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 368, fig. 314; pl. 25, fig. 20.
Normanskill sh. Lansingburg, N. Y.
R. Ruedemann, coll. 1900

7139 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 25, fig. 19.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Diplograptus bimucronatus see Lasiograptus (Hallograptus) bimucronatus

Diplograptus (Orthograptus) calcaratus Lapworth var. acutus Lapworth

7140 HYPOTYPE *Diplograptus foliaceus* var. *acutus* (Lapworth ms.) Elles & Wood. Mon. Brit. Grapt. 1907. p. 242.

Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 349; p. 350, fig. 289.
Normanskill sh. Glenmont, Albany co. N. Y.

On slab with type of *Diplograptus (Orthograptus) calcaratus* var. *acutus,* pl. 25, fig. 1.

7141 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 350, fig. 290; pl. 25, fig. 2.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

7142 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 350, fig. 291.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. F. Cooper, coll. 1892

7143 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 350, fig. 292.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7144 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 25, fig. 1.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with type of *Diplograptus (Orthograptus) calcaratus* var. *acutus,* p. 350, fig. 289.

Diplograptus (Orthograptus) calcaratus Lapworth var. **alabamensis** Ruedemann

7145 HOLOTYPE *Diplograptus foliaceus* var. *alabamensis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 352, pl. 25, fig. 3.
Athens sh. Pratt's ferry, Bibb co. Ala.

Diplograptus (Orthograptus) calcaratus Lapworth var. **incisus** Lapworth

7146 HYPOTYPE *Diplograptus foliaceus* var. *incisus* (Lapworth ms.) Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 347; p. 348, fig. 285.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7147 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 348, fig. 286.
Normanskill sh. Mt Merino, Hudson, N .Y.
R. Ruedemann & M. Sheehy, coll. 1899

7148 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 348, fig. 287.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7149 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 24, fig. 1.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7150 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 24, fig. 2.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7151 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 24, fig. 3.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7152 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 24, fig. 4.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7153 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 24, fig. 5.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7154 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 24, fig 6.
Normanskill sh. Mt Merino, Hudson, N. Y.
M. Sheehy & W. F. Cooper, coll. 1892

7155 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 24, fig. 7.
Normanskill sh. Mt Merino, Hudson, N. Y.
R. Ruedemann & M. Sheehy, coll. 1899

7156 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 24, fig. 8.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Diplograptus (Glyptograptus) euglyphus Lapworth

7157 HYPOTYPE *Diplograptus (Glyptograptus) euglyphus* Lapworth. Ann. and Mag. Nat. Hist., 5th ser. 1880. 5:166.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 369; p. 370, fig. 315; pl. 25, fig. 23.
Normanskill sh. Speigletown, Rensselaer co. N. Y.
R. Ruedemann, coll. 1902

7158 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 370, fig. 316; pl. 25, fig. 22.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Diplograptus (Glyptograptus) euglyphus Lapworth var. pygmaeus Ruedemann

7159 HOLOTYPE (original & counterpart) *Diplograptus (Glyptograptus) euglyphus* var. *pygmaeus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 371; p. 371, fig. 317, 318; pl. 25, fig. 24.
Normanskill sh. Lansingburg, N. Y.
R. Ruedemann, coll. 1900

Diplograptus foliaceus var. **acutus** see **Diplograptus (Orthograptus) calcaratus** var. **acutus**

Diplograptus foliaceus var. **alabamensis** see **Diplograptus (Orthograptus) calcaratus** var. **alabamensis**

Diplograptus foliaceus var. **incisus** see **Diplograptus (Orthograptus) calcaratus** var. **incisus**

Diplograptus foliaceus mut. **vespertinus** see **Diplograptus (Glyptograptus) vespertinus**

Diplograptus (Amplexograptus) macer Ruedemann

7160 COTYPE *Diplograptus (Amplexograptus) macer* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 82; p. 83, fig. 21; pl. 2. fig. 20.
Canajoharie sh. Minaville, N. Y.
R. Ruedemann, coll.

7161 COTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 83, fig. 22; pl. 2, fig. 21.
Canajoharie sh. Minaville, N. Y
R. Ruedemann, coll.

Diplograptus (Mesograptus) mohawkensis Ruedemann

7162 PARATYPE *Diplograptus (Mesograptus) mohawkensis* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 80; p. 81, fig. 20; pl. 2, fig. 19.
Canajoharie sh. Carlsbad spring, Saratoga Springs, N. Y.
R. Ruedemann, coll.

Diplograptus (Orthograptus) nexus Ruedemann

7163 HOLOTYPE *Diplograptus (Orthograptus) nexus* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 55; p. 57, fig. 41; pl. 7, fig. 5.

Whetstone Gulf formation

Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

Diplograptus (Orthograptus) cf. nexus Ruedemann

7164 HYPOTYPE *Diplograptus peosta* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 83, fig. 23; pl. 2, fig. 17.

Indian Ladder beds Indian Ladder, Albany co. N. Y.
R. Ruedemann, coll. 1910

Diplograptus peosta see Diplograptus (Orthograptus) cf. nexus

Diplograptus peosta see Diplograptus (Glyptograptus) peosta

Diplograptus (Glyptograptus) peosta (Hall)

7165 HYPOTYPE *Graptolithus (Diplograptus) peosta* Hall. Wis. Geol. Surv., Rep't Sup't 1861. p. 17.

Diplograptus peosta Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 372; p. 373, fig. 321.

Maquoketa sh. Granger, Minn.
Prof. Sardeson, don.

7166 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 373, fig. 322.

Maquoketa sh. Granger, Minn.
Prof. Sardeson, don.

On slab with type of *Diplograptus (Glyptograptus) peosta,* p. 373, fig. 323.

7167 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 373, fig. 323.

Maquoketa sh. Granger, Minn.
Prof. Sardeson, don.

On slab with type of *Diplograptus (Glyptograptus) peosta,* p. 373, fig. 322.

7168 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 25, fig. 17.
Maquoketa sh. Graf, Iowa
Prof. Sardeson, don.

Diplograptus recurrens see Diplograptus (Amplexograptus) recurrens

Diplograptus (Amplexograptus) recurrens Ruedemann

7169 COTYPE *Diplograptus recurrens* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 58; p. 57, fig. 42; pl. 7, fig. 3.
Pulaski sh. Loose near station 12 of Lorraine section, N. Y.
R. Ruedemann, coll. 1907

7170 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 57, fig. 43; pl. 7, fig. 2.
Pulaski sh. Lorraine village, N. Y.

7171 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 57, fig. 44.
Pulaski sh. Wood creek section, N. Y.
R. Ruedemann, coll.

7172 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 57, fig. 45.
Pulaski sh. Lorraine gorge (Allendale), N. Y.
R. Ruedemann, coll.

7173 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 57, fig. 46; pl. 7, fig. 4.
Pulaski sh. Station 15 of Wood creek section, N. Y.
R. Ruedemann, coll.

Diplograptus ruedemanni see Lasiograptus (Thysanograptus) eucharis

Diplograptus tricornis see Cryptograptus tricornis

Diplograptus (Glyptograptus) vespertinus Ruedemann

7174 COTYPE *Diplograptus foliaceus (Murchison)* mut. *vespertinus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 352; p. 350, fig. 293; pl. 25, fig. 4.
Snake Hill sh. Van Schaick isl., near Cohoes, N. Y.
R. Ruedemann, coll. 1900

7175 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 353, fig. 296.
Snake Hill sh. Van Schaick isl., near Cohoes, N. Y.
R. Ruedemann, coll. 1900

7176 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 353, fig. 297.
Snake Hill sh. Ward's lane, near North Albany, N. Y.

7177 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 25, fig. 5.
Canajoharie sh. Amsterdam, N. Y.
H. J. Hickock, coll.

DIPLOSPIROGRAPTUS Ruedemann

Diplospirograptus goldringae Ruedemann

7178 COTYPE *Diplospirograptus goldringae* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 34; p. 35, fig. 21.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with type of *Diplospirograptus goldringae,* p. 35, fig. 22.

7179 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 35, fig. 22.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

On slab with type of *Diplospirograptus goldringae,* p. 35, fig. 21.

7180 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 7, fig. 1.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7181 COTYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 7, fig. 2.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7182 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 7, fig. 3.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7183 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 7, fig. 4.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7184 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 7, fig. 5.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

GLOSSOGRAPTUS Emmons

Glossograptus ciliatus Emmons

7185 HYPOTYPE *Glossograptus ciliatus Emmons.* Amer. Geol. 1855. v. 1, pt 2, p. 108.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 379; p. 75, fig. 8.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

On slab with type of *Glossograptus ciliatus,* p. 381, fig. 331.

7186 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 94, fig. 31.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

7187 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 94, fig. 32.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

7188 HYPOTYPE *Climacograptus parvus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 94, fig. 34.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

7189 HYPOTYPE *Glossograptus ciliatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 327.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

On slab with type of *Glossograptus ciliatus,* p. 381, fig. 330.

7190 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 328; pl. 26, fig. 1.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 15, fig. 9.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

7191 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 329.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

7192 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 330.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883
On slab with type of *Glossograptus ciliatus,* p. 381, fig. 327.

7193 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 331.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883
On slab with type of *Glossograptus ciliatus,* p. 75, fig. 8.

7194 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 332.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

7195 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 333.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883
On slab with type of *Dicellograptus gurleyi,* p. 103, fig. 42; p. 304, fig. 224.

7196 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 334.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7197 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 381, fig. 335.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7198 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 26, fig. 2.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 15, fig. 13.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7199 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 26, fig. 3.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 15, fig. 15.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7200 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 26, fig. 4.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7201 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 26, fig. 5; pl. 27, fig. 2.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7202 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 27, fig. 1.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7203 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 27, fig. 3.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7204 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 27, fig. 4.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Glossograptus ciliatus Emmons var. **debilis** Ruedemann

7205 COTYPE *Glossograptus ciliatus* var. *debilis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 384, pl. 26, fig. 6.
Normanskill sh. Mount Merino, Hudson, N. Y.
M. Sheehy and W. F. Cooper, coll. 1892

7206 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 26, fig. 7.
Normanskill sh. Mount Merino, Hudson, N. Y.
M. Sheehy and W. F. Cooper, coll. 1892

Glossograptus (?) eucharis see **Lasiograptus (Thysanograptus) eucharis**

Glossograptus quadrimucronatus (Hall) var. approximatus Ruedemann

7207 PARATYPE *Glossograptus quadrimucronatus* var. *approximatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 392; p. 392, fig. 337.
Utica sh. Dolgeville, N. Y.
R. Ruedemann, coll.

7208 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 26, fig. 11.
Utica sh. Oxtungo creek near Fort Plain, N. Y.

Glossograptus quadrimucronatus (Hall) var. cornutus Ruedemann

7209 COTYPE *Glossograptus quadrimucronatus* var. *cornutus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 393; p. 71, fig. 1; p. 393, fig. 339.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7210 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 72, fig. 6; p. 393, fig. 340.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7211 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 393, fig. 338.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7212 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 393, fig. 341.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7213 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 393, fig. 342.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7214 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 27, fig. 8.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

On slab with type of *Climacograptus strictus,* p. 416, fig. 372.

7215 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 27, fig. 9.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7216 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 27, fig. 10.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7217 HYPOTYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 8, fig. 7.
Canajoharie sh. Rural Cemetery, Albany, N. Y.

Glossograptus quadrimucronatus (Hall) mut. **lorrainensis** Ruedemann

7218 HOLOTYPE *Glossograptus quadrimucronatus* mut. *lorrainensis* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 68, pl. 7, fig. 6.
Whetstone Gulf formation
Station 7 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

7219 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 61, fig. 53.
Whetstone Gulf formation
Station 6 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Glossograptus quadrimucronatus (Hall) mut. postremus Ruedemann

7220 HOLOTYPE *Glossograptus quadrimucronatus* mut. *postremus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 394; p. 394, fig. 343; pl. 26, fig. 16.
Snake Hill beds Waterford, N. Y.
R. Ruedemann, coll. 1900

Glossograptus quadrimucronatus (Hall) mut. timidus (Ruedemann)

7241 COTYPE *Lasiograptus bimucronatus* mut. *timidus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 483; p. 484, fig. 464; pl. 29, fig. 20.
Utica sh. Fulmer creek near Mohawk, N. Y.

7242 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 484, fig. 465.
Maquoketa sh. Granger, Minn.
Prof. F. W. Sardeson, don.

7243 COTYPE Reudemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 19.
Utica sh. Holland Patent, N. Y.
Rust Collection

Glossograptus whitfieldi (Hall)

7221 HYPOTYPE *Graptolithus whitfieldi* Hall. Pal. N. Y. 1959. 3:516.

Glossograptus whitfieldi Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 394, pl. 26, fig. 17.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. Van Deloo, coll.

On slab with types of *Climacograptus tridentatus,* pl. A, fig. 33; *Retiograptus geinitzianus,* pl. 31, fig. 14.

Gorgonia ? reteformis see **Dictyonema retiforme**

Graptolithus amplexicaule see **Diplograptus (amplexograptus) amplexicaulis**

Graptolithus angustifolius see **Diplograptus (Glyptograptus) angustifolius**

Graptolithus annectans see **Leptograptus annectans**

Graptolithus bicornis see Climacograptus bicornis

Graptolithus clintonensis see Monograptus clintonensis

Graptolithus divaricatus see Dicellograptus divaricatus

Graptolithus divergens see Amphigraptus divergens

Graptolithus furcatus see Dicranograptus furcatus

Graptolithus ? laevis see Mastigograptus laevis

Graptolithus mucronatus see Lasiograptus (Hallograptus) mucronatus

Graptolithus (Diplograptus) peosta see Diplograptus (Glyptograptus) peosta

Graptolithus serratulus see Didymograptus serratulus

Graptolithus sextans see Dicellograptus sextans

Graptolithus tenuis see Didymograptus subtenuis

Graptolithus venosus see Retiolites geinitzianus var. venosus

Graptolithus whitfieldi see Glossograptus whitfieldi

INOCAULIS Hall

Inocaulis akronensis Ruedemann

7222 COTYPE (of description) *Inocaulis akronensis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 28.
Akron wl. Akron, N. Y.
E. Reinhard, coll.

7223 COTYPE (of description) Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 28.
Akron wl. Akron, N. Y.
E. Reinhard, coll.

Inocaulis anastomotica see Palaeodictyota anastomotica

Inocaulis arbuscula see Dictyonema arbusculum

Inocaulis cervicornis see Thallograptus cervicornis

Inocaulis kirki Ruedemann

7224 HOLOTYPE *Inocaulis kirki* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 17; p. 17, fig. 5.
Trenton ls. Balsam lake, Victoria co. Ont. Can.
Edwin Kirk, coll. 1909

7225 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 17, fig. 6.
Trenton ls. Balsam lake, Victoria co. Ont. Can.
Edwin Kirk, coll. 1909

Inocaulis lesquereuxi (Grote & Pitt)

7226 HYPOTYPE *Buthotrephis lesquereuxi* Grote & Pitt. Buffalo Soc. Nat. Sci., Bul. 1876. 3:88.
Inocaulis lesquereuxi Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 13, pl. 4, fig. 3.
Bertie wl. Buffalo, N. Y.

7227 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 27, pl. 12, fig. 1.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

7228 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 12, fig. 2.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Inocaulis ramulosus Spencer

7229 HYPOTYPE *Inocaulis ramulosa* Spencer. Can. Nat., n. s. 1882. 10:165 (nom. nud.).
Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 28; p. 28, fig. 19.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Inocaulis vegetabilis see Thallograptus granti

Inocaulis walkeri see Acanthograptus walkeri

LASIOGRAPTUS Lapworth

Lasiograptus bimucronatus see Lasiograptus (Hallograptus) bimucronatus

Lasiograptus bimucronatus mut. timidus see Glossograptus quadrimucronatus mut. timidus

Lasiograptus (Hallograptus) bimucronatus (Nicholson)

7230 HYPOTYPE *Diplograptus bimucronatus* Nicholson. Ann. and Mag. Nat. Hist. 1869. 4: 236.

Lasiograptus bimucronatus Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 481; p. 482, fig. 462.

Normanskill sh. Kenwood, Albany co. N. Y.

R. P. Whitfield and C. Van Deloo, coll.

On slab with types of *Dicellograptus divaricatus* var. *bicurvatus,* p. 300, fig. 216; pl. 18, fig. 8; *Nemagraptus gracilis* var. *surcularis,* pl. 17, fig. 2.

7231 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 482, fig. 463.

Normanskll sh. Glenmont, Albany co. N. Y.

C. Van Deloo, coll. 1883

On slab with type of *Leptograptus flaccidus* var. *spinifer* mut. *trentonensis,* p. 263, fig. 176.

7232 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 12.

Normanskill sh. Mount Merino, Hudson, N. Y.

R. Ruedemann and M. Sheehy, coll. 1899

On slab with types of *Lasiograptus bimucronatus,* pl. 30, fig. 6, 7.

7233 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 13.

Normanskill sh. Mount Merino, Hudson, N. Y.

R. Ruedemann and M. Sheehy, coll. 1899

7234 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 14.

Normanskill sh. Mount Merino, Hudson, N. Y.

R. Ruedemann and M. Sheehy, coll. 1899

7235 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 17.

Normanskill sh. Mount Merino, Hudson, N. Y.

R. Ruedemann and M. Sheehy, coll. 1899

7236 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 18.

Normanskill sh. Mount Merino, Hudson, N. Y.

R. Ruedemann and M. Sheehy, coll. 1899

On slab with type of *Lasiograptus (Hallograptus) mucronatus,* pl. 30, fig. 5.

7237 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 30, fig. 6.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

On slab with types of *Lasiograptus bimucronatus,* pl. 29, fig. 12; pl. 30, fig. 7.

7238 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 30, fig. 7.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

On slab with types of *Lasiograptus bimucronatus,* pl. 29, fig. 12; pl. 30, fig. 6.

7239 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 30, fig. 8.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 16, fig. 4.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

7240 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 4.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

Lasiograptus (Thysanograptus) eucharis (Hall)

7244 HYPOTYPE *Glossgraptus (?) eucharis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 397; p. 397, fig. 347; pl. 26, fig. 18.
Snake Hill sh. Mechanicville, Saratoga co. N. Y.
R. Ruedemann, coll. 1900

7245 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 397, fig. 348.
Utica sh. Dolgeville, N. Y.
R. Ruedemann, coll.

On slab with type of *Lasiograptus (Thysanograptus) eucharis,* pl. 26, fig. 19.

7246 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 397, fig. 349.
Utica sh. Dolgeville, N. Y.

7247 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 397, fig. 350.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7248 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 397, fig. 351.
Maquoketa sh. Elgin, Iowa
Prof. F. W. Sardeson, don.

7249 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 397, fig. 352.
Snake Hill sh. Mechanicville, N. Y.
R. Ruedemann, coll. 1901

7250 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 26, fig. 19.
Utica sh. Dolgeville, N. Y.
On slab with type of *Lasiograptus (Thysanograptus) eucharis*, p. 397, fig. 348.

7251 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 27, fig. 13.
Canajoharie sh. Rural Cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

7252 HYPOTYPE *Lasiograptus (Thysanograptus) eucharis* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 84; p. 85, fig. 24.
Schenectady beds Dettbarn quarry, near Schenectady, N. Y.
R. Ruedemann, coll.

7253 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 85, fig. 26.
Schenectady beds Dettbarn quarry, near Schenectady, N. Y.
R. Ruedemann, coll.

7254 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 85, fig. 27.
Canajoharie sh.
Chuctenunda creek near Amsterdam, N. Y.
R. Ruedemann, coll.

7255 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 85, fig. 28.
Canajoharie sh.
Chuctenunda creek near Amsterdam, N. Y.
R. Ruedemann, coll.

Lasiograptus mucronatus see Lasiograptus (Hallograptus) mucronatus

Lasiograptus (Hallograptus) mucronatus (Hall)

7256 HYPOTYPE *Graptolithus mucronatus* Hall. Pal. N. Y. 1847. 1:268.

Lasiograptus mucronatus Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 479; p. 480, fig. 456.

Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7257 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 480, fig. 457; pl. 29, fig. 11.

Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with counterpart of type of *Climacograptus parvus,* pl. 28, fig. 22.

7258 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 9; pl. 31, fig. 1.

Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7259 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 10.

Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

On slab with type of *Climacograptus parvus,* pl. 28, fig. 20.

7260 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 30, fig. 1.

Ruedemann. G. S. A., Mem. 2. 1934. pl. 16, fig. 5.

Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

7261 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 30, fig. 2.

Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. Van Deloo, coll.

7262 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 30, fig. 4.

Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

7263 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 30, fig. 5.

Ruedemann. G. S. A., Mem. 2. 1934. pl. 16, fig. 6.

Normanskill sh. Mount Merino, Hudson, N. Y.

On slab with type of *Lasiograptus bimucronatus,* pl. 29, fig. 18.

7264 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 2.

Normanskill sh. Mount Merino, Hudson, N. Y.

R. Ruedemann and M. Sheehy, coll. 1899

LEPTOGRAPTUS Lapworth

Leptograptus annectans (Walcott)

7265 HYPOTYPE *Graptolithus annectans* Walcott. Albany Inst., Tr. 1883. 10: 20 (advance sheets, 1879).

Leptograptus annectans Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 264; p. 265, fig. 180.

Utica sh. Holland Patent, N. Y.

Rust purchase

On slab with types of *Leptograptus annectans,* p. 265, fig. 181; *Leptograptus annectans* var. *typus,* pl. 14, fig. 5.

7266 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 265, fig. 181.

Utica sh. Holland Patent, N. Y.

Rust purchase

On slab with types of *Leptograptus annectans,* p. 265, fig. 180; *Leptograptus annectans var. typus,* pl. 14, fig. 5.

Leptograptus annectans see **Leptograptus annectans** var. **typus**

Leptograptus annectans (Walcott) var. **patens** Ruedemann

7268 COTYPE *Leptograptus annectans* var. *patens* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 51, pl. 6, fig. 6.

Up. Utica sh. Maynard creek near Marcy, N. Y.

R. Ruedemann, coll. 1916

7269 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 6, fig. 7.

Up. Utica sh. Deerfield, near Utica, N. Y.

R. Ruedemann, coll.

7270 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 6, fig. 8.
Up. Utica sh. Maynard creek near Marcy, N. Y.
R. Ruedemann, coll. 1916

Leptograptus annectans (Walcott) var. **typus** Ruedemann

7267 HOLOTYPE *Leptograptus annectans* Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 14, fig. 5.
Leptograptus annectans var. typus Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 50, pl. 6, fig. 1.
Utica sh. Holland Patent, N. Y.
Rust purchase
On slab with types of *Leptograptus annectans,* p. 265, fig. 180, 181.

Leptograptus flaccidus (Hall) var. **spinifer** Elles & Wood mut. **trentonensis** Ruedemann

7271 HOLOTYPE *Leptograptus flaccidus* var. *spinifer* mut. *trentonensis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 262; p. 263, fig. 177, 178; pl. 14, fig. 8.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7272 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 263, fig. 176.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883
On slab with type of *Lasiograptus bimucronatus,* p. 482, fig. 463.

7273 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 14, fig. 9.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

Leptograptus flaccidus (Hall) var. **spinifer** Elles & Wood mut. **trifidus** Ruedemann

7274 HOLOTYPE (original & counterpart) *Leptograptus flaccidus* var. *spinifer* mut. *trifidus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 263; p. 264, fig. 179.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

Leptograptus flaccidus (Hall) mut. **trentonensis** Ruedemann

7275 COTYPE *Leptograptus flaccidus* mut. *trentonensis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 261; p. 261, fig. 172.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

7276 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 261, fig. 173.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

7277 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 261, fig. 174.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

7278 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 14, fig. 7.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

Leptograptus subtenuis see **Didymograptus subtenuis**

LEVEILLEITES Foerste

Leveilleites hartnageli Foerste

7279 HOLOTYPE *Leveilleites hartnageli* Foerste. Denison Univ. Sci. Lab., Bul. 1923. 20: 62, pl. 4, fig. A.
Manitoulin dol. Near Credit Forks station, Ont.
C. A. Hartnagel, coll. 1913

MASTIGOGRAPTUS Ruedemann

Mastigograptus circinalis Ruedemann

7280 COTYPE (original & counterpart) *Mastigograptus circinalis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 222, pl. 10, fig. 3.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

On slab with types of *Mastigograptus circinalis,* pl. 12, fig. 7, 8.

7281 COTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 7.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

On slab with types of *Mastigograptus circinalis,* pl. 10, fig. 3; pl. 12, fig. 8.

7282 COTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 8.
Canajoharie sh. Rural cemetery, Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

On slab with types of *Mastigograptus circinalis,* pl. 10, fig. 3; pl. 12, fig. 7.

Mastigograptus ? flaccidus Ruedemann

7283 HOLOTYPE *Mastigograptus ? flaccidus* Ruedemann. N. Y. S. M. Bul. 133. 1909. p. 207, pl. 3, fig. 6.
Glens Falls ls. Glens Falls, N. Y.

Mastigograptus laevis (Hall)

7284 HYPOTYPE *Graptolithus ? laevis* Hall. Pal. N. Y. 1847. 1: 274.

Mastigograptus laevis Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 45; p. 44, fig. 26.
Deer River sh. Whetstone gulf, N. Y.
R. Ruedemann, coll.

7285 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 44, fig. 27B.
Frankfort sh. Delta Dam, N. Y.
R. Ruedemann, coll.

Mastigograptus simplex (Walcott)

7286 HYPOTYPE *Dendrograptus simplex* Walcott. Albany Inst., Tr. 1883. 10: 20 (advance sheets, 1879).

Mastigograptus simplex Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 218; p. 219, fig. 115.
Utica sh. Holland Patent, N. Y.
Rust purchase, 1890

7287 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 9, fig. 1.
Utica sh. Holland Patent, N. Y.
Rust purchase, 1890

On slab with types of *Mastigograptus simplex,* pl. 12, fig. 3, 4.

7288 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 3.
Utica sh. Holland Patent, N. Y.
Rust purchase, 1890

On slab with types of *Mastigograptus simplex,* pl. 9, fig. 1; pl. 12, fig. 4.

7289 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 4.
Utica sh. Holland Patent, N. Y.
Rust purchase, 1890

On slab with types of *Mastigograptus simplex,* pl. 9, fig. 1; pl. 12, fig. 3.

7290 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 5.
Utica sh. Holland Patent, N. Y.
Haskell purchase, 1881

Mastigograptus tenuiramosus (Walcott)

7291 HYPOTYPE *Dendrograptus tenuiramosus* Walcott. Albany Inst., Tr. 1883. 10:21 (advance sheets, 1879).
Mastigograptus tenuiramosus Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 216, pl. 9, fig. 2.
Utica sh. Holland Patent, N. Y.
Rust purchase, 1890

7292 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 9, fig. 3.
Utica sh. Holland Patent, N. Y.
Ch. Haskell purchase, 1881

7293 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 1.
Utica sh. Holland Patent, N. Y.
Rust purchase, 1890

7294 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 2.
Utica sh. Holland Patent, N. Y.
Rust purchase, 1890

MEDUSAEGRAPTUS Ruedemann

Medusaegraptus graminiformis (Pohlman)

7295 HYPOTYPE *Chondrites graminiformis* Pohlman. Buffalo Soc. Nat. Sci., Bul. 1886. v. 5, no. 1, p. 32.
Medusaegraptus graminiformis Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 30, pl. 8, fig. 3.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

7296 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 8, fig. 4.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Medusaegraptus mirabilis Ruedemann

7297 COTYPE *Medusaegraptus mirabilis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 32, pl. 9, fig. 1.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7298 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 9, fig. 2.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7299 COTYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 9, fig. 3.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7300 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 9, fig. 4.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7301 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 9, fig. 5.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7302 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 9, fig. 6.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7303 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 10, fig. 1.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7304 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 10, fig. 2.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7305 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 10, fig. 3.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7306 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 10, fig. 4.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Medusaegraptus (?) wilsoni Ruedemann

7307 HOLOTYPE *Medusaegraptus (?) wilsoni* Ruedemann. N. Y. S. M. Bul. 327. 1942. p. 23, fig. 5 (8, 9).
Normanskill sh. (Mount Merino member)
Stuyvesant Falls, Columbia co. N. Y.
T. Y. Wilson and H. Dill, coll. 1934

MONOGRAPTUS Geinitz

Monograptus sp.

7308 HYPOTYPE Undescribed *Monograptid* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 454, fig. 434.
Aroostook ls. Caribou, Me.
O. O. Nylander, coll.

Monograptus clintonensis (Hall)

7309 HYPOTYPE *Graptolithus clintonensis* Hall. Geol. N. Y., Rep't 4th Dist. 1843. p. 74.

Monograptus clintonensis Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 450; p. 451, fig. 427.
Clinton sh. Genesee gorge, Rochester, N. Y.
H. C. Wardell, coll.

7310 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 451, fig. 428.
Clinton sh. Genesee gorge, Rochester, N. Y.
H. C. Wardell, coll.

7311 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 451, fig. 429, 430.
Clinton sh. Genesee gorge, Rochester, N. Y.

7312 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 451, fig. 431.
Clinton sh. Genesee gorge, Rochester, N. Y.
H. C. Wardell, coll.

7313 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 1.
Clinton sh. Genesee gorge, Rochester, N. Y.
H. C. Wardell, coll.

Monograptus priodon (Bronn) mut. chapmanensis Ruedemann

7314 COTYPE *Monograptus priodon* mut. *chapmanensis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 454; p. 454, fig. 432.
Clinton (age) ss. Aroostook co. Me.
O. O. Nylander, coll.

7315 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 454, fig. 433; pl. 29, fig. 2.
Clinton (age) ss. Aroostook co. Me.
O. O. Nylander, coll.

Nemagrapsus capillaris see **Thamnograptus capillaris**

NEMAGRAPTUS Emmons

Nemagraptus exilis (Lapworth)

7316 HYPOTYPE *Coenograptus exilis* (Lapworth ms.) Gurley. Jour. Geol. 1896. 4: 68.
Nemagraptus exilis Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 287, pl. 17, fig. 3.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883
On slab with type of *Nemagraptus exilis,* pl. 17, fig. 8.

7317 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 17, fig. 5.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

7318 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 17, fig. 8.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883
On slab with type of *Nemagraptus exilis,* pl. 17, fig. 3.

7319 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 17, fig. 9.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

Nemagraptus exilis (Lapworth) var. linearis Ruedemann

7320 COTYPE *Nemagraptus exilis* var. *linearis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 290; p. 72, fig. 4; p. 290, fig. 204.
Normanskill sh. Speigletown, near Troy, N. Y.
R. Ruedemann, coll. 1902

7321 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 290, fig. 205; pl. 17, fig. 12.
Normanskill sh. Mount Merino, Hudson, N. Y.
M. Sheehy and W. F. Cooper, coll. 1892

7322 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 17, fig. 10.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. VanDeloo, coll.
On slab with type of *Dicellograptus mensurans,* p. 295, fig. 210, 211; pl. 18, fig. 2.

7323 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 17, fig. 11.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

Nemagraptus gracilis (Hall)

7324 HYPOTYPE (original & counterpart) *Nemagraptus gracilis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 277; p. 279, fig. 194, 195; pl. 16, fig. 4.
Normanskill sh. Kenwood, Albany, N. Y
R. P. Whitfield and C. Van Deloo, coll.

7325 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 16, fig. 1.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

7326 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 16, fig. 2.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. VanDeloo, coll.

7327 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 16, fig. 3.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. VanDeloo, coll.

7328 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 16, fig. 9.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. VanDeloo, coll.

Nemagraptus gracilis (Hall) var. approximatus Ruedemann

7329 COTYPE (original & counterpart) *Nemagraptus gracilis* var. *approximatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 287; p. 286, fig. 200; pl. 16, fig. 6.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. VanDeloo, coll.

7330 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 286, fig. 201; pl. 16, p. 5.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. VanDeloo, coll.

Nemagraptus gracilis (Hall) var. distans Ruedemann

7331 HOLOTYPE *Nemagraptus gracilis* var. *distans* Ruedemann. N. Y. S. M., Mem.11. 1908. p. 286, pl. 16, fig. 7.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

7332 PARATYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 16, fig. 8.
Normanskill sh. Glenmont, Albany co. N. Y.
C. VanDeloo, coll. 1883

Nemagraptus gracilis (Hall) var. surcularis (Hall)

7333 HYPOTYPE *Coenograptus surcularis* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 20. 1867. p. 179.

Nemagraptus gracilis var. *surcularis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 282, pl. 17, fig. 1.
Normanskill sh. Kenwood, Albany, N. Y.
R. P. Whitfield and C. VanDeloo, coll.

7334 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 17, fig. 2.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield and C. Van Deloo, coll.

On slab with types of *Dicellograptus divaricatus* var. *bicurvatus,* p. 300, fig. 216; pl. 18, fig. 8; *Lasiograptus bimucronatus,* p. 482, fig. 462.

Odontocaulis hepaticus see Callograptus hepaticus

Orthograptus (?) sp. see Diplograptus (Orthograptus) (?) sp.

PALAEODICTYOTA Whitfield

Palaeodictyota anastomotica (Ringueberg)

7338 HYPOTYPE *Inocaulis anastomotica* Ringueberg. Phila. Acad. Nat. Sci., Pr. 1888. 39:131, 132.

Palaeodictyota anastomotica Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 200; p. 201, fig. 103.
Rochester sh. Middleport, N. Y.
Lawrence LaForge, coll. 1900

7339 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 6, fig. 4.
Rochester sh. Middleport, N. Y.
L. LaForge, coll. 1900

Palaeodictyota bella (Hall and Whitfield) mut. **recta** Ruedemann

7340 HOLOTYPE *Palaeodictyota bella* mut. *recta* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 204, pl. 6, fig. 6; pl. 7, fig. 6.
Clinton sh. Clinton, N. Y.
C. A. Hartnagel, coll. 1907

Palaeodictyota buffaloensis Ruedemann

7341 HOLOTYPE *Palaeodictyota buffaloensis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 33; p. 33, fig. 20.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Palaeodictyota clintonensis Ruedemann

7342 COTYPE *Palaeodictyota clintonensis* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 203; p. 203, fig. 104; pl. 6, fig. 5; pl. 7, fig. 5.
Clinton sh. Clinton, N. Y.
C. A. Hartnagel, coll. 1907

7343 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 8, fig. 3.
Clinton sh. Clinton, N. Y.
R. Ruedemann, coll. 1907

PLEUROGRAPTUS Nicholson

Pleurograptus linearis (Carruthers)

7344 HYPOTYPE *Cladograpsus linearis* Carruthers. Roy. Philos. Soc. Edinburgh, Tr. 1858. 1: 467.

Pleurograptus linearis Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 269; p. 269, fig. 186; pl. 15, fig. 1.
Utica sh. Holland Patent, N. Y.
Charles Haskell purchase, 1881

PTILOGRAPTUS Hall

Ptilograptus hartnageli Ruedemann

7345 HOLOTYPE *Ptilograptus hartnageli* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 149; p. 149, fig. 54; pl. 1, fig. 9.
Clinton sh. Sterling station, Cayuga co. N. Y.
C. A. Hartnagel, coll. 1907

Ptilograptus poctai Ruedemann

7346 HOLOTYPE *Ptilograptus poctai* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 148; p. 148, fig. 53; pl. 1, fig. 8.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

PTIOGRAPTUS Ruedemann

Ptiograptus multispinus (Gurley)

7347 COTYPE *Acanthograptus multispinus* (Gurley ms.) Bassler. U. S. N. M., Bul. 65. 1909. p. 61; p. 61, fig. 85.
Lockport ls. Hamilton, Ont. Can.

Ptiograptus percorrugatus Ruedemann

7348 HOLOTYPE *Ptiograptus percorrugatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 176; p. 177, fig. 82, 83; pl. 5, fig. 6.
Mid. Devonian wl. Louisville, Ky.

Reteograptus geinitzianus see **Retiograptus geinitzianus**

RETICULOGRAPTUS Wiman

Reticulograptus polymorphus (Gurley)

7110 HYPOTYPE *Dictyonema polymorphus* (Gurley ms.) Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 158; p. 160, fig. 70, 71.
Lockport ls. Hamilton, Ont. Can.
J. Schuler exchange

7111 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 2, fig. 3.
Rochester sh. Middleport, N. Y.
J. M. Clarke & D. D. Luther, coll. 1899

RETIOGRAPTUS Hall

Retiograptus eucharis see **Lasiograptus (Thysanograptus) eucharis**

Retiograptus geinitzianus (Hall)

7349 HYPOTYPE *Reteograptus geinitizianus* Hall. Pal. N. Y. 1859. 3:518.
Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 463, pl. 29, fig. 5; pl. 31, fig. 13.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 16, fig. 3.
Normanskill sh. Schodack Landing, N. Y.
R. Ruedemann, coll. 1899

7350 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 6.
Normanskill sh. Schodack Landing, N. Y.
R. Ruedemann, coll. 1899

7351 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 9.
Normanskill sh. Chatham, N. Y.
I. P. Bishop, coll.

7352 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 10.
Normanskill sh. Schodack Landing, N. Y.
R. Ruedemann, coll. 1899

7353 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 11.
Normanskill sh. Chatham, N. Y.
I. P. Bishop, coll.

7354 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 12.
Normanskill sh. Schodack Landing, N. Y
R. Ruedemann, coll. 1899
On slab with type of *Retiograptus geinitzianus,* pl. 31, fig. 15.

7355 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 14.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield and C. Van Deloo, coll.
On slab with types of *Climacograptus tridentatus,* pl. A, fig. 33; *Glossograptus whitfieldi,* pl. 26, fig. 17.

7356 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 15.
Normanskill sh. Schodack Landing, N. Y.
R. Ruedemann, coll. 1899
On slab with type of *Retiograptus geinitzianus,* pl. 31, fig. 12.

RETIOLITES Barrande

Retiolites geinitzianus Barrande var. **venosus** (Hall)

7357 HYPOTYPE *Graptolithus venosus* Hall. Pal. N. Y. 1852. 2: 40.
Retiolites geinitzianus var. *venosus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 469, pl. 29, fig. 7.
Clinton sh. Genesee gorge, Rochester, N. Y.
H. C. Wardell, coll.
Drawing made from two specimens.
On slab with type of *Retiolites geinitzianus* var. *venosus,* pl. 31, fig. 8.

7358 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 29, fig. 8.
Clinton sh. Palmer's glen, near Rochester, N. Y.
H. C. Wardell, coll.

7359 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 6.
Clinton sh. Genesee gorge, Rochester, N. Y.
Pickett collection
On slab with type of *Retiolites geinitzianus* var. *venosus,* pl. 31, fig. 7.

7360 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 7.
Clinton sh. Genesee gorge, Rochester, N. Y.
Pickett collection
On slab with type of *Retiolites geinitzianus* var. *venosus,* pl. 31, fig. 6.

7361 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 31, fig. 8.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 16, fig. 2.
Clinton sh. Genesee gorge, Rochester, N. Y.
H. C. Wardell, coll.
On slab with type of *Retiolites geinitzianus* var. *venosus,* pl. 29, fig. 7.

STAUROGRAPTUS Emmons

Staurograptus dichotomus Emmons

7362 HYPOTYPE *Staurograptus dichotomus* Ruedemann. G. S. A., Mem. 2. 1934. p. 67, pl. 2.
Schaghticoke sh. Schaghticoke, Rensselaer co. N. Y.
R. Ruedemann, coll. 1902

On slab with types of *Sphenophycus graptolithiferum,* pl. 2; *Acrotreta bisecta,* pl. 17, fig. 1.

SYNDYOGRAPTUS Ruedemann

Syndyograptus pecten Ruedemann

7363 COTYPE *Syndyograptus pecten* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 267; p. 267, fig. 184; pl. 15, fig. 6.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

7364 COTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 267, fig. 185.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

7365 COTYPE (original & counterpart) Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 15, fig. 5.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

THALLOGRAPTUS Ruedemann

Thallograptus cervicornis (Spencer)

7367 HYPOTYPE *Inocaulis cervicornis* Spencer. Can. Nat., n. s. 1882. 10:165 (nom. nud.).

Thallograptus phycoides Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 36; p. 36, fig. 23.
Rochester sh. Lockport, N. Y.
E. Reinhard, coll.

Thallograptus granti (Dawson)

7366 HOLOTYPE *Buthotrephis grantii* Dawson. Geol. Soc. London, Quart. Jour. 1890. 46: 613.

Inocaulis vegetabilis (Gurley ms.) Bassler. U. S. N. M., Bul. 65. 1909. p. 55, pl. 5, fig. 1.
Lockport ls. Hamilton, Ont. Can.

Thallograptus phycoides see Thallograptus cervicornis

THAMNOGRAPTUS Hall

Thamnograptus capillaris (Emmons)

7368 HYPOTYPE *Nemagrapsus capillaris* Emmons. Amer. Geol. 1855. v. 1, pt 2, p. 109.
Thamnograptus capillaris Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 206, pl. 10, fig. 5.
Normanskill sh. Mount Merino, Hudson, N. Y.
R. Ruedemann and M. Sheehy, coll. 1899

7369 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 10, fig. 6.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

7370 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 10, fig. 7; pl. 12, fig. 10-12.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

7371 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl 10, fig. 8.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

7372 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 9.
Normanskill sh. Mount Merino, Hudson, N. Y.
M. Sheehy and W. F. Cooper, coll. 1892

7373 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 13.
Normanskill sh. Glenmont, N. Y.
C. Van Deloo, coll. 1883

7374 HYPOTYPE Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 12, fig. 15, 16.
Normanskill sh. Kenwood, Albany co. N. Y.
R. P. Whitfield and C. Van Deloo, coll.

Thamnograptus ? chaetophorus (Gurley)

7375 HOLOTYPE *Acanthograptus chaetophorus* (Gurley ms.) Bassler. U. S. N. M., Bul. 65. 1909. p. 61; p. 61, fig. 84; pl. 3, fig. 5.
Lockport ls. Hamilton, Ont. Can.

TRIOGRAPTUS Monsen

Triograptus osloensis Monsen

7376 HYPOTYPE *Triograptus osloensis* Monsen. Norsk. Geol. Tids. 1925. Bd. 8, p. 168.

Ruedemann. Amer. Jour. Sci. 1937. 33: 59, p. 58, fig. 3.

Ruedemann. G. S. A., Mem. 19. 1947. p. 321, pl. 53, fig. 43, 44.

Matane sh. Matane, Quebec

Ward exchange

7377 HYPOTYPE Ruedemann. Amer. Jour. Sci. 1937. v. 33, p. 58, fig. 4.

Ruedemann. G. S. A., Mem. 19. 1947. pl. 53, fig. 41, 42.

Matane sh. Matane, Quebec

Ward exchange

On slab with type of *Dictyonema flabelliforme* var. *sociale*, pl. 2, fig. 13.

Triograptus osloensis see Triograptus osloensis mut. minor

Triograptus osloensis Monsen mut. minor Ruedemann

7378 COTYPE *Triograptus osloensis* Ruedemann. Amer. Jour. Sci. 1937. v. 33, p. 58, fig. 1.

Triograptus osloensis mut. *minor* Ruedemann. G. S. A., Mem. 19. 1947. p. 324, pl. 53, fig. 46.

Matane sh. Matane, Quebec

Ward exchange

7379 COTYPE Ruedemann. Amer. Jour. Sci. 1937. v. 33, p. 58, fig. 2.

Ruedemann. G. S. A., Mem. 19. 1947. pl. 53, fig. 45.

Matane sh. Matane, Quebec

Ward exchange

On slab with type of *Triograptus osloensis* mut. *minor*, pl. 53, fig. 49, 51, 52.

7380 COTYPE Ruedemann. Amer. Jour. Sci. 1937. v. 33, p. 58, fig. 5.

Ruedemann. G. S. A., Mem. 19. 1947. pl. 53, fig. 49, 51, 52.

Matane sh. Matane, Quebec

Ward exchange

On slab with type of *Triograptus osloensis* mut. *minor*, pl. 53, fig. 45.

CYSTOIDEA

PLEUROCYSTITES Billings

Pleurocystites squamosus Billings mut. matutinus Ruedemann

7381 HOLOTYPE *Pleurocystites squamosus* mut. *matutina* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 27, pl. 5, fig. 2.
Glens Falls ls. South Glens Falls, N. Y.

7382 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 5, fig. 1.
Glens Falls ls. South Glens Falls, N. Y.

7383 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 5, fig. 3.
Glens Falls ls. South Glens Falls, N. Y.

7384 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 5, fig. 4.
Glens Falls ls. South Glens Falls, N. Y.

PYRGOCYSTIS Bather

Pyrgocystis batheri Ruedemann

7388 HOLOTYPE *Pyrgocystis batheri* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 39, pl. 13, fig. 2-5.
Bertie wl. Bennett's quarries, North Buffalo, N. Y.
E. Reinhard, coll.

EDRIOASTEROIDEA

EDRIOASTER Billings

Edrioaster saratogensis Ruedemann

7385 HOLOTYPE: HOLOPLASTOTYPE *Edrioaster saratogensis* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 86, pl. 3, fig. 2.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

7386 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 3, fig. 3.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

7387 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 3, fig. 4.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

XENOCYSTITES Bassler

Xenocystites carteri Bassler

7389 HOLOTYPE *Xenocystites carteri* Bassler. Smithson. Misc. Coll. 1936. v. 95, no. 6, p. 3, pl. 7, fig. 14.
Hanover sh. Cattaraugus creek, Versailles, N. Y.
Alick L. Carter, don. 1935

BLASTOIDEA

BLASTOIDOCRINUS Billings

Blastoidocrinus carchariaedens Billings

7390 HYPOTYPE *Blastoidocrinus carchariaedens* Billings. Can. G. S., Can. Organic Remains, dec. 4. 1859. p. 18.
Hudson. N. Y. S. M. Bul. 107. 1907. p. 97, pl. 4, fig. a.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7391 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. b.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7392 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. c.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7393 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. d.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7394 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. e.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7395 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. f.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7396 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. g.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7397 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. h.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7398 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. i.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7399 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. j.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7400 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. k.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7401 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. l.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson. coll.

7402 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4. fig. m.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7403 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. n.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7404 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. a.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7405 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. b.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7406 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. c.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7407 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. d.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7408 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. e.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7409 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. f.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7410 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl 5, fig. g.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7411 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. h.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7412 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. i.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7413 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. k.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7414 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. l.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7415 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. m.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7416 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. n.
Hudson. N. Y. S. M. Bul. 149. 1911. pl. 2, fig. 2.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7417 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. o.
Hudson. N. Y. S. M. Bul. 149. 1911. p. 210, fig. 1.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7418 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. a.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7419 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. b.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7420 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. c.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7421 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. d.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7422 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. e.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7423 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. f.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7424 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. g.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7425 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. h.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7426 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. i.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7427 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. j.
Chazy ls. Valcour isl., Lake Champlain, N. Y.

7428 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. k, l.
Hudson. N. Y. S. M. Bul. 149. 1911. pl. 1, fig. 1.
Chazy ls. Valcour isl., Lake Champlain, N. Y.

7429 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. a.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7430 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. b.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7431 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. c.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7432 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. d.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7433 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. e.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7434 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. f.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7435 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. g.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7436 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. h.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7437 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. i.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7438 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. j.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7439 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. k.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7440 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. l.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7441 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. m.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7442 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. n.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7443 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. o.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7444 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. p.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7445 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. q.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7446 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. t.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7447 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. u.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7448 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. v.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7449 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. w.
Chazy ls. Valcour isl., Lake Champlain, N. Y.
G. H. Hudson, coll.

7450 HYPOTYPE Hudson. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. x.
Chazy ls. Valcour isl., Lake Champlain, N. Y.

CRINOIDEA

ACANTHOCRINUS Roemer

Acanthocrinus onondaga Goldring

7451 HOLOTYPE *Acanthocrinus onondaga* Goldring. N. Y. S. M., Mem. 16. 1923. p. 94, pl. 2, fig. 12.
Onondaga ls. Limerock, Genesee co. N. Y.
Fred Brawn, coll. 1908

Acanthocrinus spinosus (Hall)

7452 HYPOTYPE *Acanthocrinus spinosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 92, pl. 2, fig. 11.
Hamilton (Moscow) sh. Vincent, N. Y.

Actinocrinus eucharis see **Gennaeocrinus eucharis**

Actinocrinus kentuckiensis see **Gennaeocrinus kentuckiensis**

ANAMESOCRINUS Goldring

Anamesocrinus lutheri Goldring

7453 COTYPE: COPLASTOTYPE *Anamesocrinus lutheri* Goldring. N. Y. S. M., Mem. 16. 1923. p. 324, pl. 40, fig. 6, 7.
Low. Chemung beds Scott's ravine, Fillmore, N. Y.

7454 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 40, fig. 8.
Low. Chemung beds
Along road from Watkins to Elmira, N. Y.
C. Van Deloo, coll. 1870
On slab with type of *Anamesocrinus lutheri,* pl. 40, fig. 9.

7455 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 40, fig. 9.
Low. Chemung beds
Along road from Watkins to Elmira, N. Y.
C. Van Deloo, coll. 1870
On slab with type of *Anamesocrinus lutheri,* pl. 40, fig. 8.

ANCYROCRINUS Hall

Ancyrocrinus bulbosus Hall

7456 HOLOTYPE *Ancyrocrinus bulbosus* Hall. N. Y. S. Cab. Nat. Hist., Ann. rep't 15. 1862. p. 118, pl. 1, fig. 25.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 456, pl. 59, fig. 14.
Hamilton (Moscow) sh. Shore of Lake Erie, N. Y.

7457 HYPOPLASTOTYPE Goldring. Buffalo Soc. Nat. Sci., Bul. 1942. v. 17, no. 3, p. 15, pl. 4, fig. 1.
Ludlowville sh.
South branch of Smokes creek, Windom, Erie co. N. Y.
Max and Rudolph Kopf, coll. 1940

7458 ONOMAPLASTOTYPE Goldring. Buffalo Soc. Nat. Sci., Bul. 1942. v. 17, no. 3, p. 18.
Ludlowville sh. Deer lake, Schuylkill co. Pa.
W. S. Cramer, coll.

Ancyrocrinus quinquepartitus Goldring

7459 HOLOTYPE *Ancyrocrinus quinquepartitus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 458, pl. 59, fig. 15, 16.
Oriskany (Glenerie) ls. Glenerie, N. Y.
Alfred Simmons, coll.

AOROCRINUS Wachsmuth & Springer

Aorocrinus cauliculus (Hall)

7460 HYPOTYPE *Aorocrinus cauliculus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 249, pl. 35, fig. 3.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

Aorocrinus formosus Goldring

7461 HOLOTYPE *Aorocrinus formosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 259, pl. 35, fig. 5-7.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7462 PARATYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 35, fig. 8, 9.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

ARACHNOCRINUS Meek & Worthen

Arachnocrinus bulbosus (Hall)

7463 HYPOTYPE *Arachnocrinus bulbosus* Springer. Mus. Comp. Zool., Mem. 1911. v. 25, no. 3, p. 128, pl. 2, fig. 5.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 353, pl. 45, fig. 5.
Onondaga ls. Near Le Roy, N. Y.

7464 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 45, fig. 6, 7.
Onondaga ls. Le Roy, N. Y.

7465 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 45, fig. 8-10.
Onondaga ls. Le Roy, N. Y.

7466 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 45, fig. 11.
Onondaga ls. Le Roy, N. Y.

7467 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 45, fig. 12.
Onondaga ls. Ontario, Can.

7468 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 45, fig. 1 (left).
Onondaga ls. Near Le Roy, N. Y.
C. A. White, coll.

On slab with type of *Arachnocrinus bulbosus,* pl. 45, fig. 1 (right).

7469 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 45, fig. 13.
Onondaga ls. Limerock, Genesee co. N. Y.
Fred Brawn, coll. 1908

7470 HYPOTYPE Springer. Mus. Comp. Zool., Mem. 1911. v. 25, no. 3, pl. 2, fig. 7.

Goldring. N. Y. S. M., Mem. 16. 1923. pl. 45, fig. 3, 4.
Onondaga ls. Near Le Roy, N. Y.
J. M. Clarke, coll. 1886

Arachnocrinus extensus Wachsmuth & Springer

7471 HYPOTYPE *Arachnocrinus extensus* Wachsmuth & Springer. Rev. of Palaeocr. 1879. pt 1, p. 93 (Authors' ed.); Phila. Acad. Nat. Sci., Pr. 1879. 31: 316.

Goldring. N. Y. S. M., Mem. 16. 1923. p. 355, pl. 46, fig. 6.
Onondaga ls. Limerock, Genesee co. N. Y.
J. M. Clarke, coll. 1886

7472 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 47, fig. 2.
Onondaga ls. Le Roy, N. Y.

7473 ONOMATYPE Goldring. N. Y. S. M., Mem. 16. 1923. p. 356.
Onondaga ls. Schoharie co. N. Y.

Arachnocrinus ignotus Stauffer

7474 HYPOTYPE *Arachnocrinus ignotus* Stauffer. Jour. Geol. 1918. v. 26, no. 6, p. 555.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 357, pl. 46, fig. 2.
Onondaga ls. Limerock, Genesee co. N. Y.
Fred Brawn, coll. 1908

7475 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 46, fig. 3.
Onondaga ls. Limerock, Genesee co. N. Y.

7476 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 46, fig. 4.
Onondaga ls. Limerock, Genesee co. N. Y.
J. M. Clarke, coll. 1886

7477 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 46, fig. 5.
Onondaga ls. Le Roy, N. Y.

Arthracantha eboracea see **Arthroacantha eboracea**

Arthracantha granosa see **Arthroacantha granosa**

Arthracantha splendens see **Arthroacantha splendens**

ARTHROACANTHA Williams

Arthroacantha eboracea (Hall)

7478 HYPOTYPE *Arthracantha eboracea* Goldring. N. Y. S. M., Mem. 16. 1923. p. 279, pl. 37, fig. 3.
Hamilton (Moscow) sh. Moscow, N. Y.

Arthroacantha granosa (Goldring)

7479 COTYPE *Arthracantha granosa* Goldring. N. Y. S. M., Mem. 16. 1923. p. 298, pl. 37, fig. 12.
Grimes ss. Deyo basin, near Naples, N. Y.

7480 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 37, fig. 13.
Grimes ss. Deyo basin, near Naples, N. Y.

7481 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 37, fig. 14.
Grimes ss. Deyo basin, near Naples, N. Y.

7482 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 37, fig. 15.
Low. Chemung beds Avoca, N. Y.
C. J. Sarle, coll. 1897

Arthroacantha splendens (Goldring)

7483 HOLOTYPE: HOLOPLASTOTYPE *Arthracantha splendens* Goldring. N. Y. S. M., Mem. 16. 1923. p. 302, pl. 37, fig. 16.
Low. Chemung beds Four miles north of Bath, N. Y.

ASPIDOCRINUS Hall

Aspidocrinus callosus Hall

7484 HYPOTYPE *Aspidocrinus callosus* Hall. Pal. N. Y. 1859. 3:123.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 444, pl. 59, fig. 10.
New Scotland ls. Schoharie, N. Y.

7485 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 59, fig. 11, 12.
New Scotland ls. Schoharie, N. Y.

Aspidocrinus onondagensis Goldring

7486 HOLOTYPE *Aspidocrinus onondagensis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 444, pl. 59, fig. 13.
Onondaga ls. Limerock, Genesee co. N. Y.
Fred Brawn, coll. 1908

Aspidocrinus scutelliformis Hall

7487 HYPOTYPE *Aspidocrinus scutelliformis Hall.* Pal. N. Y. 1859. 3:122.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 442, pl. 59, fig. 6, 7.
Becraft ls. Becraft mt., Hudson, N. Y.

Astrocrinites pachydactylus see **Ctenocrinus pachydactylus**

BOTRYOCRINUS Angelin

Botryocrinus concinnus Goldring

7488 HOLOTYPE *Botryocrinus concinnus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 369, pl. 47, fig. 11, 12.
Hamilton (Skaneateles) sh.
East side of Owasco lake, Cayuga co. N. Y.

Botryocrinus doubleti Kirk

7489 HOLOPLASTOTYPE *Botryocrinus doubleti Kirk* (in Clarke). Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 316; fig. p. 317.
Devonian Pebble isl. West Falkland
C. A. Allardyce, don.

Botryocrinus nycteus (Hall)

7490 HYPOTYPE *Botryocrinus nycteus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 363, pl. 47, fig. 5, 6.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.
(Head of specimen is lost.)

Botryocrinus obconicus Goldring

7491 HOLOTYPE *Bothryocrinus obconicus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 371, pl. 47, fig. 13.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

Botryocrinus sentosus Goldring

7492 HOLOTYPE *Botryocrinus sentosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 372, pl. 41, fig. 10.
Hamilton (Moscow) sh. Cashong creek, Yates co. N. Y.

On slab with types of *Decadocrinus multinodosus,* pl. 55, fig. 7; *Logocrinus geniculatus,* pl. 57, fig. 1; *Melocrinites powelli,* pl. 15, fig. 8, 9.

Brachiocrinus nodosarius see **Myelodactylus nodosarius**

Cacabocrinus glyptus see **Dolatocrinus glyptus**

Cacabocrinus liratus see **Dolatocrinus liratus**

Cacabocrinus troosti see **Clarkeocrinus troosti**

CARABOCRINUS Billings

Carabocrinus cf. radiatus Billings

7493 HYPOTYPE: HYPOPLASTOTYPE *Carabocrinus radiatus* Billings. Can. G. S., Rep't Prog. for 1853-1856. 1857. p. 276.
Carabocrinus cf. *radiatus* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 86, pl. 3, fig. 6.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

CATACTOCRINUS Goldring

Catactocrinus leptodactylus Goldring

7494 COTYPE: COPLASTOTYPE *Catactocrinus leptodactylus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 405, pl. 53, fig. 5.
Low. Chemung beds Cotton hill, Avoca, Steuben co. N. Y.
C. J. Sarle, coll. 1897

7495 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 53, fig. 6.
Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7496 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 53, fig. 7.
Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7497 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 53, fig. 8.
Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7498 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 53, fig. 9.
Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

CHARIENTOCRINUS Goldring

Charientocrinus (?) cooperi Goldring

7499 COTYPE: COPLASTOTYPE (original & counterpart) *Charientocrinus (?) cooperi* Goldring. N. Y. S. M. Bul. 267. 1926. p. 89; p. 90, fig. 1; pl. 1, fig. 1-3.
Hamilton beds Hamilton, N. Y.
G. A. Cooper, don. 1925

7500 COTYPE (of description) Goldring. N. Y. S. M. Bul. 267. 1926. p. 89.
Hamilton beds Hamilton, N. Y.
G. A. Cooper, don. 1925

7501 COTYPE (of description) (original & counterpart) Goldring. N. Y. S. M. Bul. 267. 1926. p. 89.
Hamilton beds Hamilton, N. Y.
G. A. Cooper, don. 1925

Charientocrinus ithacensis Goldring

7502 COTYPE *Charientocrinus ithacensis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 402, pl. 53, fig. 1.
Ithaca beds Ithaca, N. Y.

On slab with type of *Charientocrinus ithacensis,* pl. 53, fig. 4.

7503 COTYPE (original & counterpart) Goldring. N. Y. S. M., Mem. 16. 1923. pl. 53, fig. 2.
Ithaca beds Ithaca, N. Y.

On slab with type of *Charientocrinus ithacensis,* pl. 53, fig. 3.

7504 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 53, fig. 3.
Ithaca beds Ithaca, N. Y.

On slab with type of *Charientocrinus ithacensis,* pl. 53, fig. 2.

7505 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 53, fig. 4.
Ithaca beds Ithaca, N. Y.

On slab with type of *Charientocrinus ithacensis,* pl. 53, fig. 1.

CLARKEOCRINUS Goldring

Clarkeocrinus troosti (Hall)

7506 COTYPE *Cacabocrinus troosti* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 138.
Hamilton (Moscow) sh. Vincent, N. Y.

7507 HYPOTYPE *Clarkeocrinus troosti* Goldring. N. Y. S. M., Mem. 16. 1923. p. 181, pl. 21; pl. 25.
Hamilton (Moscow) sh. Vincent, N. Y.
On slab with type of *Clarkeocrinus troosti*, pl. 23, fig. 1; pl. 25.

7508 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 23, fig. 1; pl. 25.
Hamilton (Moscow) sh. Vincent, N. Y.
On slab with type of *Clarkeocrinus troosti*, pl. 21; pl. 25.

7509 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 23, fig. 2.
Hamilton (Moscow) sh. Vincent, N. Y.

7510 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 23, fig. 5.
Hamilton (Moscow) sh. Vincent, N. Y.

7511 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 24, fig. 2, 3.
Hamilton (Moscow) sh. Vincent, N. Y.

7512 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 24, fig. 4.
Hamilton (Moscow) sh. Vincent, N. Y.

COMANTHOCRINUS Springer

Comanthocrinus indianensis (Miller & Gurley)

7513 ONOMATYPE *Stereocrinus indianensis* Miller & Gurley. Ill. S. M. N. H., Bul. 1897. 12:38.
Comanthocrinus indianensis Goldring. N. Y. S. M., Mem. 16. 1923. p. 192.
Hamilton (Moscow) beds Canandaigua lake, N. Y.
C. A. White & C. Van Deloo, coll. 1860

CORDYLOCRINUS Angelin

Cordylocrinus plumosus (Hall)

7514 HYPOTYPE *Platycrinus plumosus* Hall. Pal. N. Y. 1859. 3:113.
Cordylocrinus plumosus Goldring. N. Y. S. M., Mem. 16. 1923. p. 273, pl. 36, fig. 6.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.

7515 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 36, fig. 10.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.

7516 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 36, fig. 11.
Coeymans ls. (probably Manlius) Schoharie, N. Y.

COREMATOCRINUS Goldring

Corematocrinus plumosus Goldring

7517 COTYPE: COPLASTOTYPE *Corematocrinus plumosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 435, pl. 56, fig. 6.
Low. Chemung beds Chemung narrows, Chemung co. N. Y.

7518 COTYPE: COPLASTOTYPE (original & counterpart) Goldring. N. Y. S. M., Mem. 16. 1923. pl. 56, fig. 7, 8.
Low. Chemung beds Chemung narrows, Chemung co. N. Y.

7519 COTYPE: COPLASTOTYPE (original & counterpart) Goldring. N. Y. S. M., Mem. 16. 1923. pl. 56, fig. 9.
Gardeau beds Deyo basin, Naples, N. Y.

COROCRINUS Goldring

Corocrinus ornatus Goldring

7520 COTYPE *Corocrinus ornatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 203, pl. 26, fig. 2.
Hamilton (Ludlowville) sh. Fall brook near Geneseo, N. Y.

7521 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 26, fig. 3.
Hamilton (Ludlowville) sh. Fall brook near Geneseo, N. Y.
On slab with type of *Corocrinus ornatus,* pl. 26, fig. 4.

7522 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 26, fig. 4.
Hamilton (Ludlowville) sh. Fall brook near Geneseo, N. Y.
On slab with type of *Corocrinus ornatus,* pl. 26, fig. 3.

CRADEOCRINUS Goldring

Cradeocrinus elongatus Goldring

7523 COTYPE: COPLASTOTYPE (original & counterpart) *Cradeocrinus elongatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 348, pl. 41, fig. 11, 12.
Low. Chemung beds — Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7524 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 41, fig. 13.
Low. Chemung beds — Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

Cradeocrinus pergracilis Goldring

7525 HOLOTYPE *Cradeocrinus pergracilis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 350, pl. 42, fig. 1.
Ithaca beds — Ravine east of South Otselic, N. Y.
D. D. Luther, coll. 1900

CRATEROCRINUS Goldring

Craterocrinus ruedemanni Goldring

7526 HOLOTYPE *Craterocrinus ruedemanni* (Goldring ms.) Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 69; p. 70, fig. 56 (also Yale Univ. press. New Haven. 1921).
Goldring. N. Y. S. M., Mem. 16. 1923. p. 186, pl. 20, fig. 7, 8.
Onondaga ls. — Cherry Valley, N. Y.

Craterocrinus schoharie Goldring

7527 HOLOTYPE *Craterocrinus schoharie* Goldring. N. Y. S. M., Mem. 16. 1923. p. 189, pl. 20, fig. 9.
Goldring. N. Y. S. M. Bul. 315. 1938. p. 77, fig. 23 (6).
Onondaga ls. — Schoharie, N. Y.

CTENOCRINUS Bronn

Ctenocrinus nobilissimus (Hall)

7528 HYPOTYPE *Mariacrinus nobilissimus* Hall. Pal. N. Y. 1859. 3:105.
Mariacrinus ramosus Goldring. N. Y. S. M., Mem. 16. 1923. p. 111, pl. 5, fig. 4.
Coeymans ls. (probably Manlius)
Wheelock's hill, Litchfield, N. Y.
On slab with type of *Ctenocrinus nobilissimus*, Pal. N. Y. v. 3, pl. 2, fig. 6.

7529 HYPOTYPE *Melocrinus nobilissimus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 117, pl. 6, fig. 3.
Coeymans ls. (probably Manlius) Litchfield, N. Y.

Ctenocrinus pachydactylus (Conrad)

7530 HYPOTYPE *Astrocrinites pachydactylus* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 5. 1841. p. 34.
Mariacrinus plumosus Goldring. N. Y. S. M., Mem. 16. 1923. p. 109, pl. 5, fig. 2.
Coeymans ls. (probably Manlius) Schoharie, N. Y.

7531 HYPOTYPE *Melocrinus pachydactylus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 119, pl. 8, fig. 4.
Coeymans ls. (probably Manlius) Schoharie, N. Y.

Ctenocrinus paucidactylus (Hall)

7532 HYPOTYPE *Mariacrinus paucidactylus* Hall. Pal. N. Y. 1859. 3:109.
Melocrinus paucidactylus Goldring. N. Y. S. M., Mem. 16. 1923. p. 122, pl. 9, fig. 1.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
On slab with types of *Ctenocrinus paucidactylus,* pl. 9, fig. 2-8.

7533 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 9, fig. 2.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
On slab with types of *Ctenocrinus paucidactylus,* pl. 9, fig. 1, 3-8.

7534 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 9, fig. 3.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
On slab with types of *Ctenocrinus paucidactylus,* pl. 9, fig. 1, 2, 4-8.

7535 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 9, fig. 4.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
On slab with types of *Ctenocrinus paucidactylus,* pl. 9, fig. 1-3, 5-8.

7536 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 9, fig. 5.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
On slab with types of *Ctenocrinus paucidactylus,* pl. 9, fig. 1-4, 6-8.

7537 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 9, fig. 6.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
On slab with types of *Ctenocrinus paucidactylus,* pl. 9, fig. 1-5, 7, 8.

7538 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 9, fig. 7.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
On slab with types of *Ctenocrinus paucidactylus,* pl. 9, fig. 1-6, 8.

7539 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 9, fig. 8.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
On slab with types of *Ctenocrinus paucidactylus,* pl. 9, fig. 1-7.

7540 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 9, fig. 9.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.

DECADOCRINUS Wachsmuth & Springer

Decadocrinus decemnodosus Goldring

7541 HOLOTYPE: HOLOPLASTOTYPE *Decadocrinus decemnodosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 424, pl. 55, fig. 6.
Ithaca beds Near Morris, Otsego co. N. Y.
D. D. Luther, coll. 1900

Decadocrinus insolens Goldring

7542 COTYPE: COPLASTOTYPE *Decadocrinus insolens* Goldring. N. Y. S. M., Mem. 16. 1923. p. 426, pl. 56, fig. 3.
Genesee (West River) sh. Blacksmith gully, Bristol, N. Y.

7543 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 56, fig. 4.
Genesee (West River) sh. Blacksmith gully, Bristol, N. Y.

7544 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 56, fig. 5.
Genesee (West River) sh. Blacksmith gully, Bristol, N. Y.
J. M. Clarke, coll.

Decadocrinus killawogensis Goldring

7545 HOLOTYPE: HOLOPLASTOTYPE *Decadocrinus killawogensis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 428, pl. 54, fig. 18.
Ithaca beds
Killawog creek west of Killawog, Broome co. N. Y.

7546 PARATYPE: PARAPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 54, fig. 19.
Grimes ss. Parrish gully, Naples, N. Y.
D. D. Luther, coll. 1900

Decadocrinus multinodosus Goldring

7547 COTYPE: COPLASTOTYPE *Decadocrinus multinodosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 429, pl. 55, fig. 7.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.
On slab with types of *Botryocrinus sentosus,* pl. 41, fig. 10; *Logocrinus geniculatus,* pl. 57, fig. 1; *Melocrinites powelli,* pl. 15, fig. 8, 9.

7548 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 55, fig. 8, 9.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.
Edwin Kirk, coll.

7549 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 55, fig. 10.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7550 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 55, fig. 11.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

Decadocrinus multinodosus Goldring var. serratobrachiatus Goldring

7551 HOLOTYPE *Decadocrinus multinodosus* var. *serratobrachiatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 431, pl. 56, fig. 1, 2.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

Decadocrinus nereus (Hall)

7552 HYPOTYPE *Decadocrinus nereus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 419, pl. 54, fig. 13-15.
Hamilton (Moscow) sh. North Bristol, N. Y.

Decadocrinus rugistriatus Goldring

7553 COTYPE: COPLASTOTYPE (original & counterpart) *Decadocrinus rugistriatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 432, pl. 55, fig. 1.
West Hill flags Italy hollow, near Naples, N. Y.

7554 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 55, fig. 2.
West Hill flags Italy hollow, near Naples, N. Y.

7555 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 55, fig. 3.
West Hill flags Italy hollow, near Naples, N. Y.

7556 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 55, fig. 4.
West Hill flags Italy hollow, near Naples, N. Y.

7557 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 55 fig. 5.
Ithaca beds Near Ithaca, N. Y

Dimerocrinites nodulosus see Griphocrinus nodulosus

Dimerocrinites nodulosus var. pernodosus see Griphocrinus nodulosus var. pernodosus

DOLATOCRINUS Lyon

Dolatocrinus glyptus (Hall)

7561 HYPOTYPE *Cacabocrinus glyptus* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 140.
Dolatocrinus glyptus Goldring. N. Y. S. M., Mem. 16. 1923. p. 155, pl. 18, fig. 4.
Hamilton (Moscow) sh. York, N. Y.

7562 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 18, fig. 5.
Hamilton (Moscow) sh. York, N. Y.

7563 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 18, fig. 7.
Hamilton (Moscow) sh.
Fall brook, Hopewell, Ontario co. N. Y.
J. M. Clarke, coll. 1889
Note: May be the original of Wachsmuth & Springer, N. A. Crin. Cam., pl. 26, fig. 2b.

Dolatocrinus insignis Goldring

7564 HOLOTYPE *Dolatocrinus insignis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 174, pl. 19, fig. 3, 4.
Hamilton (Moscow) sh. Bellona, N. Y.

7565 PARATYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 19, fig. 5.
Hamilton (Moscow) sh. Bellona, N. Y.

7566 PARATYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 19, fig. 6.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

Dolatocrinus liratus (Hall)

7567 COTYPE *Cacabocrinus liratus* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 139.
Hamilton (Moscow) sh.
Cashong creek near Bellona, N. Y.

7568 COTYPE Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 139.
Dolatocrinus liratus Goldring. N. Y. S. M., Mem. 16. 1923. p. 158, pl. 17, fig. 2.
Hamilton (Moscow) sh.
Cashong creek near Bellona, N. Y.

7569 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 1.
Hamilton (Moscow) sh. Leicester, N. Y.

7570 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 3.
Hamilton (Moscow) sh. Bellona, N. Y.

7571 HYPOTYPE: HYPOPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 4.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

7572 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 5.
Hamilton (Moscow) sh. Bellona, N. Y.

7573 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 6.
Hamilton (Moscow) sh.
West shore of Canandaigua lake, N. Y.

7574 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 7.
Hamilton (Moscow) sh. Bellona, N. Y.

7575 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 8.
Hamilton (Moscow) sh.
West shore of Canandaigua lake, N. Y.

7576 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 9.
Hamilton (Moscow) sh. Bellona, N. Y.

7577 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 11.
Hamilton (Moscow) sh. Bellona, N. Y.

7578 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 12.
Hamilton (Moscow) sh. Bellona, N. Y.

7579 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 17, fig. 13.
Hamilton (Moscow) sh. Bellona, N. Y.

7580 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 18, fig. 1-3.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

Dolatocrinus liratus (Hall) var. parvulus Goldring

7581 HOLOTYPE *Dolatocrinus liratus* var. *parvulus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 164, pl. 17, fig. 14.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

Dolatocrinus lobatus Goldring

7582 HOLOTYPE *Dolatocrinus lobatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 176, pl. 20, fig. 3, 4.
Onondaga ls. Cherry Valley, N. Y.

7583 PARATYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 20, fig. 5, 6.
Onondaga ls. Cherry Valley, N. Y.

Dolatocrinus marshi Lyon var. glaber Goldring

7584 HOLOTYPE *Dolatocrinus marshi* var. *glaber* Goldring. N. Y. S. M., Mem. 16. 1923. p. 173, pl. 20, fig. 1, 2.
Onondaga ls. Cherry Valley, N. Y.

Dolatocrinus ornatus Meek

7585 HYPOTYPE *Dolatocrinus ornatus* Meek. Phila. Acad. Nat. Sci., Pr. 1871. 23:57.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 170, pl. 18, fig. 13, 14.
Onondaga ls. Cherry Valley, N. Y.

Dolatocrinus speciosus (Hall)

7586 HYPOTYPE *Dolatocrinus speciosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 168, pl. 18, fig. 11.
Onondaga ls. Cherry Valley, N. Y.

7587 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 18, fig. 12.
Onondaga ls. Schoharie co. N. Y.

Dolatocrinus troosti see **Clarkeocrinus troosti**

EDRIOCRINUS Hall

Edriocrinus pocilliformis Hall

7588 HYPOTYPE *Edriocrinus pocilliformis* Hall. Pal. N. Y. 1859 3:121.

Goldring. N. Y. S. M., Mem. 16. 1923. p. 447, pl. 58, fig. 13.

New Scotland ls. Schoharie, N. Y.

7589 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 58, fig. 14.

New Scotland ls. Schoharie, N. Y.

7590 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 58, fig. 15.

New Scotland ls. Schoharie, N. Y.

Edriocrinus sacculus Hall

7591 HYPOTYPE *Edriocrinus sacculus* Hall. Pal. N. Y. 1859. 3:143.

Goldring. N. Y. S. M., Mem. 16. 1923. p. 448, pl. 58, fig. 3.

Oriskany (Glenerie) ls. Glenerie, N. Y.

7592 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 58, fig. 4.

Oriskany (Glenerie) ls. Glenerie, N. Y.

7593 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 58, fig. 5.

Oriskany (Glenerie) ls. Glenerie, N. Y.

7594 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 58, fig. 6.

Oriskany (Glenerie) ls. Glenerie, N. Y.

7595 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 58, fig. 7.

Oriskany (Glenerie) ls. Glenerie, N. Y.

EUTAXOCRINUS Springer

Eutaxocrinus alpha (Williams)

7596 HYPOTYPE: HYPOPLASTOTYPE *Taxocrinus ithacensis* var. *alpha* Williams. Phila. Acad. Nat. Sci., Pr. 1882. v. 34, pt 1, p. 29.

Eutaxocrinus alpha Goldring. N. Y. S. M., Mem. 16. 1923. p. 311, pl. 39, fig. 7.

Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7597 HYPOTYPE: HYPOPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 39, fig. 8, 9.

Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7598 HYPOTYPE: HYPOPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 39, fig. 10.

Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7599 HYPOTYPE: HYPOPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 39, fig. 11.

Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7600 HYPOTYPE: HYPOPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 39, fig. 12.

Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7601 HYPOTYPE: HYPOPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 39, fig. 13.

Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

Eutaxocrinus curtus (Williams)

7602 HYPOTYPE: HYPOPLASTOTYPE (original & counterpart) *Taxocrinus curtus* Williams. Phila. Acad. Nat. Sci., Pr. 1882. v. 34, pt 1, p. 30.

Eutaxocrinus curtus Goldring. N. Y. S. M., Mem. 16. 1923. p. 313, pl. 39, fig. 16.

Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

7603 HYPOTYPE: HYPOPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 39, fig. 17.
Low. Chemung beds Cotton hill, Avoca, N. Y.
C. J. Sarle, coll. 1897

Eutaxocrinus dumosus Goldring

7604 COPLASTOTYPE *Eutaxocrinus dumosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 317, pl. 38, fig. 12.
Ithaca beds De Ruyter, N. Y.
Type in collection of Dr Springer

Eutaxocrinus ithacensis (Williams)

7605 HYPOTYPE: HYPOPLASTOTYPE *Taxocrinus ithacensis* Williams. Phila. Acad. Nat. Sci., Pr. 1882. v. 34, pt 1, p. 28.
Eutaxocrinus ithacensis Goldring. N. Y. S. M., Mem. 16. 1923. p. 309, pl. 39, fig. 3.
Ithaca beds Ravine east of South Otselic, N. Y.
D. D. Luther, coll. 1900

7606 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 39, fig. 4.
Ithaca beds Montour Falls, N. Y.

Eutaxocrinus pulcher Springer

7607 HOLOTYPE *Eutaxocrinus pulcher* Springer. Smithson. Pub. no. 2501. 1920. p. 369, pl. 75, fig. 10.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 314, pl. 38, fig. 8.
Low. Chemung beds Gorton's quarry, Belmont, N. Y.

7608 HYPOTYPE (original & counterpart) Goldring. N. Y. S. M Mem. 16. 1923. pl. 38, fig. 9.
Low. Chemung beds Gorton's quarry, Belmont, N. Y.
D. D. Luther, coll. 1899

7609 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 38, fig. 10.
Low. Chemung beds Gorton's quarry, Belmont, N. Y.

Forbesiocrinus lobatus see Taxocrinus lobatus

GENNAEOCRINUS Wachsmuth & Springer

Gennaeocrinus carinatus Wood

7610 HYPOTYPE *Gennaeocrinus carinatus* Wood. Amer. Jour. Sci., n. s. 1901. 12: 297.

Goldring. N. Y. S. M., Mem. 16. 1923. p. 219, pl. 32, fig. 5.

Hamilton (Ludlowville) sh. Athol Springs, N. Y.
E. Reinhard, coll. 1918

7611 HYPOTYPE: HYPOPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 32, fig. 6.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

7612 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 32, fig. 7.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

Gennaeocrinus carinatus Wood var. crassicostatus Goldring

7613 HOLOTYPE *Gennaeocrinus carinatus* var. *crassicostatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 222, pl. 32, fig. 8.

Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

Gennaeocrinus decorus Goldring

7614 HOLOTYPE: HOLOPLASTOTYPE *Gennaeocrinus decorus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 223, pl. 31, fig. 9.
Hamilton beds Worcester, N. Y.

Gennaeocrinus eucharis (Hall)

7615 COTYPE *Actinocrinus eucharis* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 130.

Gennaeocrinus eucharis Goldring. N. Y. S. M., Mem. 16. 1923. p. 212, pl. 27, fig. 1.
Hamilton (Moscow) sh. Vincent, N. Y.

7616 COTYPE Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 130.

Goldring. N. Y. S. M., Mem. 16. 1923. pl. 27, fig. 2; pl. 29.
Hamilton (Moscow) sh. Vincent, N. Y.

7617 COTYPE Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 130.
Goldring. N. Y. S. M., Mem. 16. 1923. pl. 30.
Hamilton (Moscow) sh. Vincent, N. Y.

7618 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 28, fig. 2.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7619 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 28, fig. 3.
Hamilton (Moscow) sh. Vincent, N. Y.

7620 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 28, fig. 4.
Hamilton (Moscow) sh. Fall brook, Geneseo, N. Y.

7621 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 28, fig. 5.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

Gennaeocrinus kentuckiensis (Shumard)

7622 HYPOTYPE *Actinocrinus kentuckiensis* Shumard. St Louis Acad. Sci., Tr. 1866. 2:345.
Gennaeocrinus kentuckiensis Goldring. N. Y. S. M., Mem. 16. 1923. p. 208, pl. 31, fig. 6.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

Gennaeocrinus nyssa (Hall)

7623 HYPOTYPE *Gennaeocrinus nyssa* Goldring. N. Y. S. M., Mem. 16. 1923. p. 216, pl. 31, fig. 4.
Hamilton (Moscow) sh. Fall brook near Geneseo, N. Y.

7624 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 31, fig. 5.
Hamilton (Moscow) sh. North Bristol, N. Y.

7625 ONOMATYPE Goldring. N. Y. S. M., Mem. 16. 1923. p. 216.
Hamilton (Moscow) sh. Fall brook near Geneseo, N. Y.

Gennaeocrinus peculiaris Goldring

7626 HOLOTYPE *Gennaeocrinus peculiaris* Goldring. N. Y. S. M., Mem. 16. 1923. p. 225, pl. 31, fig. 10.
Hamilton (Moscow) sh. Moscow, N. Y.

GLOSSOCRINUS Goldring

Glossocrinus naplesensis Goldring

7627 COTYPE: COPLASTOTYPE (original & counterpart) *Glossocrinus naplesensis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 390, pl. 52, fig. 1.
West Hill flags Italy hollow, near Naples, N. Y.

7628 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 52, fig. 2.
West Hill flags Italy hollow, near Naples, N. Y.

7629 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 52, fig. 3.
Grimes ss. Deyo basin, near Naples, N. Y.
D. D. Luther, coll. 1909

7630 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 52, fig. 4.
Low. Chemung beds Chemung narrows, N. Y.

7631 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 52, fig. 5.
West Hill flags Italy hollow, near Naples, N. Y.
D. D. Luther, coll. 1908

GRIPHOCRINUS Kirk

Griphocrinus nodulosus (Hall)

7558 HYPOTYPE *Rhodocrinus nodulosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 89, pl. 2, fig. 4.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

7559 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 2, fig. 5.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

Griphocrinus nodulosus (Hall) var. pernodosus (Goldring)

7560 HOLOTYPE *Rhodocrinus nodulosus* var. *pernodosus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 91, pl. 2, fig. 6.
Hamilton (Moscow) sh.
West shore of Canandaigua lake, N. Y.
C. A. White & C. Van Deloo, coll. 1860

HETEROCRINUS Hall

Heterocrinus difficilis Ulrich

7632 HYPOTYPE *Heterocrinus difficilis* (Ulrich ms.) Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 70.
Whetstone Gulf sh.
Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

On slab with type of *Homotelus stegops,* Bul. 272, pl. 22, fig. 9.

Heterocrinus ? gracilis Hall

7633 HYPOTYPE: HYPOPLASTOTYPE *Heterocrinus ? gracilis* Hall. Pal. N. Y. 1947. 1: 280.

Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 86, pl. 3, fig. 5.

Snake Hill beds — Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Heterocrinus heterodactylus Hall

7634 HYPOTYPE: HYPOPLASTOTYPE *Heterocrinus heterodactylus* Hall. Pal. N. Y. 1847. 1: 279.

Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 69; p. 69, fig. 54.

Whetstone Gulf sh. — Near Rome, N. Y.
Rust purchase

7635 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 69, fig. 55.
Whetstone Gulf sh. — Near Rome, N. Y.
Rust purchase

Homocrinus scoparius see **Lasiocrinus scoparius**

ITEACRINUS Goldring

Iteacrinus flagellum Goldring

7636 HOLOTYPE *Iteacrinus flagellum* Goldring. N. Y. S. M., Mem. 16. 1923. p. 345, pl. 42, fig. 2.
Low. Chemung beds — Cotton hill, near Avoca, N. Y.
C. J. Sarle, coll. 1897

Iteacrinus robustus Goldring

7637 HOLOTYPE: HOLOPLASTOTYPE *Iteacrinus robustus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 347, pl. 42, fig. 3.
Low. Chemung beds — Cotton hill, near Avoca, N. Y.
C. J. Sarle, coll. 1897

LASIOCRINUS Kirk

Lasiocrinus (?) schohariensis Goldring

7638 HOLOTYPE *Lasiocrinus (?) schohariensis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 343, pl. 43, fig. 9.
Schoharie grit Pine hill, Highland Mills, N. Y.

Lasiocrinus scoparius (Hall)

7639 HYPOTYPE *Homocrinus scoparius* Hall. Pal. N. Y. 1859. 3:102.
Lasiocrinus scoparius Goldring. N. Y. S. M., Mem. 16. 1923. p. 340, pl. 42, fig. 7.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
C. A. White, coll.

7640 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 42, fig. 9.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
G. B. Simpson, coll. 1873

7641 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 42, fig. 10.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.

7642 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 43, fig. 1.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.

7643 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 43, fig. 3.
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.
G. B. Simpson, coll. 1873

7644 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 43, fig. 6.
Manlius ls. Schoharie co. N. Y.

7645 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 43, fig. 7.
Manlius ls. Schoharie, N. Y.

LIPAROCRINUS Goldring

Liparocrinus batheri Goldring

7646 HOLOTYPE: HOLOPLASTOTYPE (original & counterpart) *Liparocrinus batheri* Goldring. N. Y. S. M., Mem. 16. 1923. p. 397, pl. 52, fig. 8.
Low. Chemung beds Brown hill, Cohocton, N. Y.

Liparocrinus halli Goldring

7647 COTYPE: COPLASTOTYPE *Liparocrinus halli* Goldring. N. Y. S. M., Mem. 16. 1923. p. 400, pl. 52, fig. 9, 10.
Chemung beds Tracy creek, Broome co. N. Y.
E. B. Hall, don. 1901

7648 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 52, fig. 11.
Chemung beds Tracy creek, Broome co. N. Y.
E. B. Hall, don. 1901

LOGOCRINUS Goldring

Logocrinus geniculatus Goldring

7649 COTYPE *Logocrinus geniculatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 438, pl. 57, fig. 1.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.
On slab with types of *Botryocrinus sentosus,* pl. 41, fig. 10; *Decadocrinus multinodosus,* pl. 55, fig. 7; *Melocrinites powelli,* pl. 15, fig. 8, 9.

7650 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 57, fig. 2.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7651 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 57, fig. 3.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7652 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 57, fig. 4.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7653 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 57, fig. 5, 6.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

Logocrinus infundibuliformis Goldring

7654 COTYPE: COPLASTOTYPE *Logocrinus infundibuliformis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 440, pl. 57, fig. 7.
Low. Chemung beds Chemung narrows, N. Y.

7655 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923 pl. 57, fig. 8.
Low. Chemung beds Chemung narrows, N. Y.

7656 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 57, fig. 9.
Low. Chemung beds Chemung narrows, N. Y.

7657 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 57, fig. 10.
Low. Chemung beds Chemung narrows, N. Y.

7658 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 57, fig. 11.
Low. Chemung beds Chemung narrows, N. Y.

Mariacrinus nobilissimus see Ctenocrinus nobilissimus

Mariacrinus paucidactylus see Ctenocrinus paucidactylus

Mariacrinus plumosus see Ctenocrinus pachydactylus

Mariacrinus ramosus see Ctenocrinus nobilissimus

MEGISTOCRINUS Owen & Shumard

Megistocrinus depressus (Hall)

7659 HYPOTYPE *Megistocrinus depressus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 226, pl. 33, fig. 2.
Hamilton (Moscow) sh. Bellona, N. Y.

7660 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 3, 4, 5.
Hamilton (Moscow) sh. Vincent, N. Y.

7661 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 7.
Hamilton (Moscow) sh. Vincent, N. Y.

7662 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 10, 11.
Hamilton (Moscow) sh. Vincent, N. Y.

7663 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 12.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7664 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 13.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y

7665 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 14.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7666 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 15.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7667 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 16, 17.
Hamilton (Ludlowville) sh. Alden, N. Y.

7668 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 33, fig. 18.
Hamilton (Moscow) sh. Bellona, N. Y.

Megistocrinus ontario (Hall)

7669 HYPOTYPE *Megistocrinus ontario* Goldring. N. Y. S. M., Mem. 16. 1923. p. 234, pl. 34, fig. 8.
Hamilton (Moscow) sh. North Bristol, N. Y.
C. A. White and C. Van Deloo, coll. 1860

7670 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 34, fig. 9.
Hamilton (Moscow) sh. North Bristol, N. Y.
C. A. White and C. Van Deloo, coll. 1860

7671 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 34, fig. 10.
Hamilton (Moscow) sh. North Bristol, N. Y.

MELOCRINITES Goldfuss

Melocrinites sp. (?)

7672 HYPOTYPE *Melocrinus* sp. (?) Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 73; p. 73, fig. 61 (also Yale Univ. press. New Haven. 1921).
Goldring. N. Y. S. M., Mem. 16. 1923. p. 142, pl. 15, fig. 6.
West Hill flags — Italy hollow, near Naples, N. Y.
On slab with type of *Melocrinites naplesensis,* pl. 15, fig. 5.

Melocrinites clarkei (Williams)

7673 HYPOTYPE: HYPOPLASTOTYPE *Melocrinus clarkei* Goldring. N. Y. S. M., Mem. 16. 1923. p. 132, pl. 13, fig. 5.
Cashaqua sh. — Eighteen Mile creek, North Evans, N. Y.
D. D. Luther, coll. 1910

Melocrinites micmac (Clarke)

7674 HOLOTYPE: HOLOPLASTOTYPE *Melocrinus micmac* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 165; p. 165, fig. 1-4.
Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 69; p. 69, fig. 55 (also Yale Univ. Press. New Haven. 1921).
Grande Grève ls. — Indian cove, Gaspé, Quebec
J. M. Clarke, coll.

Melocrinites naplesensis (Goldring)

7675 COTYPE *Melocrinus naplesensis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 140, pl. 15, fig. 3.
West Hill flags — Italy hollow, near Naples, N. Y.
D. Dana Luther, coll.

7676 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 15, fig. 4.
West Hill flags — Italy hollow, near Naples, N. Y.
D. Dana Luther, coll.

7677 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 15, fig. 5.
West Hill flags — Italy hollow, near Naples, N. Y.
D. Dana Luther, coll.
On slab with type of *Melocrinites* sp. (?), pl. 15, fig. 6.

Melocrinites powelli (Goldring)

7678 COTYPE *Melocrinus* sp. nov. Goldring. N. Y. S. M., Mem. 16. 1923. p. 142, pl. 15, fig. 7.
Melocrinus powelli Goldring. Carnegie Mus., Ann. 1935. 24:355, pl. 26, fig. 1.
Hamilton (Moscow) sh. Cashong creek, Bellona, N. Y.

7679 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 15, fig. 8, 9.
Hamilton (Moscow) sh.
Cashong creek, near Bellona, N. Y.
On slab with types of *Botryocrinus sentosus,* pl. 41, fig. 10; *Decadocrinus multinodosus,* pl. 55, fig. 7; *Logocrinus geniculatus,* pl. 57, fig. 1.

Melocrinites willetensis (Goldring)

7680 HOLOTYPE: HOLOPLASTOTYPE (original & counterpart) *Melocrinus willetensis* Goldring. N. Y. S. M., Mem. 16. 1923. p. 146, pl. 16, fig. 2.
Low. Chemung beds Willet, N. Y.

Melocrinities willetensis (Goldring) var. **perstriatus** (Goldring)

7681 COPLASTOTYPE *Melocrinus willetensis* var. *perstriatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 147, pl. 16, fig. 3.
Low. Chemung beds Willet, N. Y.
Type in Univ. of Chicago, Walker Mus.

7682 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 16, fig. 4.
Low. Chemung beds Willet, N. Y.

7683 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 16, fig. 5.
Low. Chemung beds Willet, N. Y.

Melocrinus sp. (?) see **Melocrinites** sp. (?)

Melocrinus sp. see **Melocrinites powelli**

Melocrinus clarkei see **Melocrinites clarkei**

Melocrinus (Trichotocrinus) lutheri see **Trichotocrinus lutheri**

Melocrinus micmac see **Melocrinites micmac**

Melocrinus naplesensis see **Melocrinities naplesensis**

Melocrinus nobilissimus see **Ctenocrinus nobilissimus**

Melocrinus pachydactylus see **Ctenocrinus pachydactylus**

Melocrinus paucidactylus see **Ctenocrinus paucidactylus**

Melocrinus powelli see **Melocrinites powelli**

Melocrinus willetensis see **Melocrinites willetensis**

Melocrinus willetensis var. **perstriatus** see **Melocrinites willetensis** var. **perstriatus**

MICTOCRINUS Goldring

Mictocrinus robustus Goldring

7684 HOLOTYPE *Mictocrinus robustus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 362, pl. 60, fig. 4, 5.
Onondaga ls. Clarence, near Buffalo, N. Y.
E. Reinhard, coll. 1919

MYELODACTYLUS Hall

Myelodactylus nodosarius (Hall)

7685 HYPOTYPE *Brachiocrinus nodosarius* Goldring. N. Y. S. M., Mem. 16. 1923. p. 332, pl. 41, fig. 3.
New Scotland ls. East of Clarksville, N. Y.

7686 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 41, fig. 4.
New Scotland ls. East of Clarksville, N. Y.

Platycrinus eboraceus see **Arthroacantha eboracea**

Platycrinus plumosus see **Cordylocrinus plumosus**

POTERIOCRINITES Miller

Poteriocrinites clarkei (Williams) var. alpha (Williams)

7687 HYPOTYPE: HYPOPLASTOTYPE *Poteriocrinus clarkei* var. *alpha* Williams. Phila. Acad. Nat. Sci., Pr. 1882. v. 34, pt 1, p. 22.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 414, pl. 54, fig. 7.
Up. Chemung beds Erie, Pa.
E. J. Armstrong, don. 1918

Poteriocrinites (?) colgatensis (Goldring)

7688 COTYPE: COPLASTOTYPE *Poteriocrinus (?) colgatensis* Goldring. N. Y. S. M. Bul. 267. 1926. p. 91, pl. 2, fig. 1, 2.
Hamilton beds Campus quarry, Hamilton, N. Y.
G. A. Cooper, don. 1925

7689 COTYPE Goldring. N. Y. S. M. Bul. 267. 1926. pl. 2, fig. 3.
Hamilton beds Campus quarry, Hamilton, N. Y.
G. A. Cooper, don. 1925

7690 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M. Bul. 267. 1926. pl. 2, fig. 4.
Hamilton beds Campus quarry, Hamilton, N. Y.
G. A. Cooper, don. 1925

7691 COTYPE Goldring. N. Y. S. M. Bul. 267. 1926. pl. 2, fig. 5.
Hamilton beds Hamilton, N. Y.
G. A. Cooper, don. 1925

7692 COTYPE Goldring. N. Y. S. M. Bul. 267. 1926. pl. 2, fig. 6.
Hamilton beds Hamilton, N. Y.
G. A. Cooper, don. 1925

Poteriocrinites (?) dignatus (Goldring)

7693 HOLOTYPE *Poteriocrinus (?) dignatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 416, pl. 54, fig. 9, 10.
Hamilton (Skaneateles) sh.
East side of Owasco lake, Cayuga co. N. Y.

Poteriocrinus clarkei var. **alpha** see **Poteriocrinites clarkei** var. **alpha**

Poteriocrinus (?) colgatensis see **Poteriocrinities (?) colgatensis**

Poteriocrinus (?) dignatus see **Poteriocrinites (?) dignatus**

Poteriocrinus nereus see **Decadocrinus nereus**

Poteriocrinus nycteus see **Botryocrinus nycteus**

PTERINOCRINUS Goldring

Pterinocrinus quinquenodus Goldring

7694 COTYPE: COPLASTOTYPE *Pterinocrinus quinquenodus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 87, pl. 1, fig. 3.
Low. Chemung beds
Chemung narrows, Chemung co. N. Y.

7695 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 1, fig. 4.
Low. Chemung beds
Chemung narrows, Chemung co. N. Y.

7696 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 1, fig. 5.
Low. Chemung beds
Chemung narrows, Chemung co. N. Y.

7697 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 1, fig. 6.
Low. Chemung beds
Chemung narrows, Chemung co. N. Y.

7698 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 1, fig. 7.
Low. Chemung beds
Chemung narrows, Chemung co. N. Y.

7699 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 1, fig. 8.
Low. Chemung beds
Chemung narrows, Chemung co. N. Y.

7700 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 1, fig. 9.
Low. Chemung beds
Chemung narrows, Chemung co. N. Y.

7701 COTYPE: COPLASTOTYPE (original & counterpart) Goldring. N. Y. S. M., Mem. 16. 1923. pl. 1, fig. 10.
Low. Chemung beds
Chemung narrows, Chemung co. N. Y.

RHODOCRINITES Miller

Rhodocrinites nortoni (Goldring)

7702 HOLOPLASTOTYPE (2 casts) *Rhodocrinus nortoni* Goldring. Portland Soc. Nat. Hist., Pr. 1933. 4:153, pl. 3, fig. 2; pl. 4, fig. 2.
Moose River ss. glacial boulder Caratunk, Me.
Type in Portland Soc. Nat. Hist. Mus.

Rhodocrinus nodulosus see **Griphocrinus nodulosus**

Rhodocrinus nodulosus var. pernodosus see **Griphocrinus nodulosus var. pernodosus**

Rhodocrinus nortoni see **Rhodocrinites nortoni**

Rhodocrinus spinosus see **Acanthocrinus spinosus**

SCHIZOCRINUS Hall

Schizocrinus ?

7703 HYPOTYPE *Schizocrinus ?* Hall. Pal. N. Y. 1847. 1: 86, pl. 29, fig. 1.
Trenton ls. Sugar river, Lewis co. N. Y.

SCHULTZICRINUS Springer

Schultzicrinus typus Springer

7704 HYPOTYPE *Schultzicrinus typus* Springer. Mus. Comp. Zool., Mem. 1911. v. 25, no. 3, p. 132.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 351, pl. 44, fig. 1.
Onondaga ls. Limerock, Genesee co. N. Y.

SPHAEROTOCRINUS Goldring

Sphaerotocrinus ornatus Goldring

7705 HOLOTYPE *Sphaerotocrinus ornatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 99, pl. 3, fig. 7, 8.
Lewistown ls. Frankstown, Pa.

Stereocrinus indianensis see **Comanthocrinus indianensis**

STYLOCRINUS Sandberger & Sandberger

Stylocrinus (?) canandaigua Goldring

7706 HOLOTYPE *Stylocrinus (?) canandaigua* Goldring. N. Y. S. M., Mem. 16. 1923. p. 331, pl. 40, fig. 19.
Hamilton (Moscow) sh.
West shore of Canandaigua lake, N. Y.

Symbathocrinus sulcatus see **Synbathocrinus sulcatus**

SYNBATHOCRINUS Phillips

Synbathocrinus sulcatus (Goldring)

7707 HOLOTYPE *Symbathocrinus sulcatus* Goldring. N. Y. S. M., Mem. 16. 1923. p. 329, pl. 40, fig. 15.
Onondaga ls. Limerock, near Le Roy, N. Y.

TAXOCRINUS Phillips

Taxocrinus curtus see **Eutaxocrinus curtus**

Taxocrinus ithacensis see **Eutaxocrinus ithacensis**

Taxocrinus ithacensis var. alpha see **Eutaxocrinus alpha**

Taxocrinus lobatus (Hall)

7708 HYPOTYPE *Forbesiocrinus lobatus* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 124.
Taxocrinus lobatus Springer. Smithson. Pub. no. 2501. 1920. p. 386, pl. 52, fig. 10.
Goldring. N. Y. S. M., Mem. 16. 1923. p. 319, pl. 39, fig. 19.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

7709 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 73; p. 73, fig. 60a.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

7710 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 39, fig. 20.
Hamilton (Moscow) sh.
Menteth's point, Canandaigua lake, N. Y.

THAMNOCRINUS Goldring

Thamnocrinus springeri Goldring

7711 COTYPE *Thamnocrinus springeri* Goldring. N. Y. S. M., Mem. 16. 1923. p. 243, pl. 26, fig. 8.
Hamilton (Moscow) sh.
Cashong creek, near Bellona, N. Y.

7712 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 26, fig. 9,10.
Hamilton (Moscow) sh.
Cashong creek, near Bellona, N. Y.

THYLACOCRINUS Oehlert

Thylacocrinus clarkei Wachsmuth & Springer

7713 HYPOTYPE *Thylacocrinus clarkei* Goldring. N. Y. S. M., Mem. 16. 1923. p. 105, pl. 4, fig. 1.
Hamilton (Moscow) sh. Vincent, N. Y.

7714 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 4, fig. 3.
Hamilton (low. Moscow) sh. Bethany, N. Y.
J. M. Clarke, coll. 1918

7715 HYPOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 4, fig. 4.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

TRICHOTOCRINUS Olsson

Trichotocrinus lutheri (Goldring)

7716 COTYPE *Melocrinus (Trichotocrinus) lutheri* Goldring. N. Y. S. M., Mem. 16. 1923. p. 149, pl. 16, fig. 7.
West Hill flags Italy hollow, near Naples, N. Y.

7717 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 16, fig. 8.
West Hill flags Italy hollow, near Naples, N. Y.

7718 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 16, fig. 9.
West Hill flags Italy hollow, near Naples, N. Y.
D. D. Luther, coll. 1908

7719 COTYPE: COPLASTOTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 16, fig. 10.
West Hill flags Italy hollow, near Naples, N. Y.
D. D. Luther, coll. 1908

7720 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 16, fig. 11.
West Hill flags Italy hollow, near Naples, N. Y.
D. D. Luther, coll. 1908

7721 COTYPE Goldring. N. Y. S. M., Mem. 16. 1923. pl. 16, fig. 12.
West Hill flags Italy hollow, near Naples, N. Y.
D. D. Luther, coll. 1908

CRINOID (root)

7722 HYPOTYPE *Crinoid* Root Goldring. N. Y. S. M., Mem. 16. 1923. p. 35, pl. 59, fig. 17.
Hamilton (Moscow) sh. Canandaigua lake, N. Y.

CRINOIDEA (joints of undetermined)

7723 HYPOTYPE Joints of Undetermined *Crinoidea* Hall. Pal. N. Y. 1852. 2:182, pl. A 41, fig. 7a-7e.
Clinton iron ore Steeles creek, Herkimer co. N. Y.

ASTEROIDEA

CLARKEASTER Ruedemann

Clarkeaster clarki (Clarke & Swartz)

7724 HOLOPLASTOTYPE (2 casts) *Palaeaster clarki* Clarke & Swartz. Md. Geol. Surv., Mid. & Up. Dev. 1913. p. 543, pl. 46, fig. 3, 4.
Jennings formation Near Oakland, Garrett co. Md.

Clarkeaster perspinosus Ruedemann

7725 HOLOTYPE: HOLOPLASTOTYPE *Clarkeaster perspinosus* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 30; p. 31, fig. 11; pl. 7, fig. 1.
Chemung beds Avoca, Steuben co. N. Y.

7726 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 7, fig. 2.
Chemung beds Avoca, Steuben co. N. Y.

DEVONASTER Schuchert

Devonaster eucharis (Hall)

7727 PARAPLASTOTYPE *Palaeaster eucharis* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 20. 1867. p. 287, pl. 9, fig. 3 (advance sheets, 1866).
Devonaster eucharis Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 33, pl. 8, fig. 1.
Hamilton beds Hamilton, N. Y.

7728 PARAPLASTOTYPE Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 20. 1867. pl. 9, fig. 3* (advance sheets, 1866).
Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 8, fig. 2.
Hamilton beds Cooperstown, N. Y.

7729 HYPOTYPE *Palaeaster eucharis* Clarke. N. Y. S. M. Bul. 158. 1912. p. 44; 1st pl. following p. 44.
Hamilton beds Saugerties, N. Y.

7730 HYPOTYPE Clarke. N. Y. S. M. Bul. 158. 1912. 2d pl. following p. 44.
Hamilton beds Saugerties, N. Y.

7731 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 9, fig. 1.
Hamilton beds Saugerties, N. Y.

7732 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 9, fig. 2.
Hamilton beds Saugerties, N. Y.

7733 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 9, fig. 4.
Hamilton beds Saugerties, N. Y.

Devonaster eucharis (Hall) var. goldringae Ruedemann

7734 HOLOTYPE *Devonaster eucharis* var. *goldringae* Ruedemann. N. Y. S. M. Bul. 267. 1926. p. 79; fig. opposite p. 79.
Gaspé beds
Fourth Lake brook, near Fourth lake, Gaspé co. P. Q. Can.
W. Goldring, coll. 1922

Helianthaster sp. see **Lepidasterella babcocki**

Helianthaster gyalum see **Lepidasterella babcocki**

Helianthaster gyalum see **Lepidasterella gyalum**

Helianthaster roemeri see **Palaeosolaster roemeri**

LEPIDASTERELLA Schuchert

Lepidasterella babcocki Schuchert

7735 HYPOTYPE *Helianthaster* sp. Clarke. N. Y. S. M., 2d Rep't Dir. 1906. p. 37; pl. opposite p. 36.
Lepidasterella babcocki Schuchert. U. S. N. M., Bul. 88. 1915. p. 160.
Lepidasterella babcocki Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 38; p. 38, fig. 14; pl. 10, fig. 6, 7.
Cashaqua beds Hunt's quarry, Interlaken, N. Y.

7736 ONOMATYPE *Helianthaster gyalum* Clarke. N. Y. S. M. Bul. 121. 1908. p. 61.
Cashaqua beds Interlaken, N. Y.

Lepidasterella gyalum (Clarke)

7737 HOLOTYPE: HOLOPLASTOTYPE *Helianthaster gyalum* Clarke. N. Y. S. M. Bul. 121. 1908. p. 63, pls. 12, 13.
Lepidasterella gyalum Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 39; p. 41, fig. 15-18; pl. 10, fig. 5.
Ithaca beds Ithaca, N. Y.
Prof. H. P. Cushing, don.

LEPIDASTERINA Ruedemann

Lepidasterina gracilis Ruedemann

7738 HOLOTYPE: HOLOPLASTOTYPE (original & counterpart) *Lepidasterina gracilis* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 43, pl. 10, fig. 1, 3.
Low. Chemung Avoca, N. Y.

7739 PARATYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 10, fig. 2, 4.
Low. Chemung Avoca, N. Y.
C. J. Sarle, coll. 1897

MACROPORASTER Raymond

Macroporaster nylanderi Raymond

7740 HOLOPLASTOTYPE *Macroporaster nylanderi* Raymond. Boston Soc. Nat. Hist., Pr. 1921. v. 36, no. 4, p. 168, pl. 3, fig. 7.
Silurian New Sweden, Aroostook co. Me.
Olof O. Nylander, coll.

Palaeaster clarki see **Clarkeaster clarki**

Palaeaster eucharis see **Devonaster eucharis**

Palaeaster pulchellus see **Urasterella pulchella**

PALAEOSOLASTER Stürtz

Palaeosolaster roemeri (Clarke)

7741 HOLOTYPE *Helianthaster roemeri* Clarke. N. Y. S. M. Bul. 121. 1908. p. 64, pl. 11.
Low. Devonian Bundenbach, Germany

PROMOPALAEASTER Schuchert

"Promopalaeaster" (?) sp.

7742 HYPOTYPE *Promopalaeaster (?)* sp. Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 37; p. 37, fig. 12.
Clinton ss. Clinton, N. Y.
J. M. Clarke, coll.

7743 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 37, fig. 13.
Clinton ss. Clinton, N. Y.
J. M. Clarke, coll.

STENASTER Billings

Stenaster salteri Billings

7744 HYPOTYPE *Stenaster salteri* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 52, pl. 11, fig. 1.
Trenton ls. Kirkfield, Ontario, Can.

7745 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 11. fig. 2.
Trenton ls. Kirkfield, Ontario, Can.

URASTERELLA McCoy

Urasterella sp.

7746 HYPOTYPE: HYPOPLASTOTYPE Urasterella sp. Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 51, pl. 13, fig. 7, 8.
Ithaca beds Messengerville, Cortland co. N. Y.

Urasterela lutheri Ruedemann

7747 HOLOTYPE: HOLOPLASTOTYPE *Urasterella lutheri* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 47, pl. 14, fig. 2.
West Hill flags Deyo basin, near Naples, N. Y.

7748 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 14, fig. 1.
West Hill flags Deyo basin, near Naples, N. Y.

7749 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 14, fig. 3; pl. 13, fig. 4.
West Hill flags Deyo basin, near Naples, N. Y.

7750 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 14, fig. 4; pl. 13, fig. 3.
West Hill flags Deyo basin, near Naples, N. Y.

7751 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 13, fig. 2.
West Hill flags Deyo basin, near Naples, N. Y.
D. D. Luther, coll. 1908

Urasterella pulchella (Billings)

7752 ONOMATYPE *Palaeaster pulchellus* Billings. Can. G. S., Rep't Prog. for 1853-56. 1857. p. 292.
Urasterella (Stenaster) pulchella Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 20. 1867. p. 289; revised ed., 1870. p. 332.
Trenton ls. Near Canajoharie, N. Y.

Urasterella (Stenaster) pulchella see **Urasterella pulchella**

Urasterella ruthveni (Forbes) mut. **arisaigensis** Ruedemann

7753 HOLOTYPE: HOLOPLASTOTYPE *Urasterella ruthveni* mut. *arisaigensis* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 46, pl. 12, fig. 3.
Arisaig series Mouth of Stonehouse brook, Nova Scotia

7754 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 11, fig. 6.
Arisaig series Mouth of Stonehouse brook, Nova Scotia

Urasterella schucherti Ruedemann

7755 HOLOTYPE: HOLOPLASTOTYPE *Urasterella schucherti* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 50, pl. 11, fig. 4; pl. 12, fig. 4.
Chemung beds Kirkwood, Broome co. N. Y.

7756 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 11, fig. 3; pl. 12, fig. 5.
Chemung beds Kirkwood, Broome co. N. Y.

Urasterella stella Ruedemann

7757 HOLOTYPE: HOLOPLASTOTYPE *Urasterella stella* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 49, pl. 12, fig. 1.
Mid. Grimes ss. 3½ miles northeast of Naples, N. Y.
D. D. Luther, coll.

7758 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 12, fig. 2.
Mid. Grimes ss. 3½ miles northeast of Naples, N. Y.

7759 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 13, fig. 1.
Mid. Grimes ss. Near Naples, N. Y.

AULUROIDEA

ARGENTINASTER Ruedemann

Argentinaster bodenbenderi Ruedemann

7760 HOLOTYPE: HOLOPLASTOTYPE *Argentinaster bodenbenderi* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 118; p. 119, fig. 38,39; pl. 18, fig. 6,7.
Silurian
Quebrada del Aquadido, Cerro Blanco, Yachal,
Argentine Republic
Prof. W. Bodenbender, coll.

ENCRINASTER Haeckel

Encrinaster pusillus Ruedemann

7761 HOLOTYPE *Encrinaster pusillus* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 58, pl. 17, fig. 1,2.
Chemung beds Elmira, N. Y.

Encrinaster yachalensis Ruedemann

7762 HOLOTYPE: HOLOPLASTOTYPE *Encrinaster yachalensis* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 117, pl. 18, fig. 1-5.
Silurian Quebrada del Aquadido, Cerro Blanco, Yachal,
Argentine Republic
Prof. W. Bodenbender, coll.

EUGASTERELLA Schuchert

Eugasterella aranea Ruedemann

7763 HOLOTYPE: HOLOPLASTOTYPE *Eugasterella aranea* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 57, pl. 15; pl. 16, fig. 1-4.
Wiscoy sh. Near Park Station, N. Y.
E. E. Davis, coll.

Eugasterella bicatenulata Ruedemann

7764 HOLOTYPE: HOLOPLASTOTYPE *Eugasterella bicatenulata* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 56, pl. 14, fig. 5; pl. 16, fig. 5.
Grimes ss. Near Naples, N. Y.

7765 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 16, fig. 6,7.
Grimes ss. Near Naples, N. Y.

HALLASTER Stürtz

Hallaster forbesi (Hall)

7766 HYPOTYPE *Protaster forbesi* Hall. Pal. N. Y. 1859. 3:134. *Hallaster forbesi* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 59, pl. 19, fig. 1 (type of restoration).
Coeymans ls. (probably Manlius)
Jerusalem hill, Litchfield, N. Y.

7767 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 19, fig. 2.
Coeymans ls. (probably Manlius) Litchfield, N. Y.

KLASMURA Ruedemann

Klasmura clavigera Ruedemann

7768 HOLOTYPE: HOLOPLASTOTYPE *Klasmura clavigera* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 66, pl. 23, fig. 9.
West Hill flags Deyo basin, near Naples, N. Y.
D. D. Luther, coll. 1908

7769 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 23, fig. 8.
West Hill flags Deyo basin, near Naples, N. Y.
D. D. Luther, coll. 1908

Klasmura mirabilis Ruedemann

7770 COTYPE: COPLASTOTYPE *Klasmura mirabilis* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 64, pl. 20, fig. 3; pl. 23, fig. 4.
West Hill flags Deyo basin, near Naples, N. Y.

7771 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 1.
West Hill flags Deyo basin, near Naples, N. Y.
On slab with type of *Klasmura mirabilis*, pl. 23, fig. 3.

7772 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 2.
West Hill flags Deyo basin, near Naples, N. Y.

7773 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 2.
West Hill flags Deyo basin, near Naples, N. Y.
Note: This specimen was used to complete the illustration of type no. 7772.

7774 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 3.
West Hill flags Deyo basin, near Naples, N. Y.

7775 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 4.
West Hill flags Deyo basin, near Naples, N. Y.

7776 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 5.
West Hill flags Deyo basin, near Naples, N. Y.
On slab with type of *Klasmura mirabilis,* pl. 23, fig. 1.

7777 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 6.
West Hill flags Deyo basin, near Naples, N. Y.

7778 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 7.
West Hill flags Deyo basin, near Naples, N. Y.

7779 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 22, fig. 8.
West Hill flags Deyo basin, near Naples, N. Y.

7780 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 23, fig. 1.
West Hill flags Deyo basin, near Naples, N. Y.
On slab with type of *Klasmura mirabilis,* pl. 22, fig. 5.

7781 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 23, fig. 2.
West Hill flags Deyo basin, near Naples, N. Y.

7782 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 23, fig. 3.
West Hill flags Deyo basin, near Naples, N. Y.
On slab with type of *Klasmura mirabilis,* pl. 22, fig. 1.

Protaster forbesi see **Hallaster forbesi**

SQUAMASTER Ringueberg

Squamaster echinatus Ringueberg

7783 HOLOTYPE *Squamaster echinatus* Ringueberg. Buffalo Soc. Nat. Sci., Bul. 1886. 5: 6, pl. 1, fig. 1.
Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 61, pl. 20, fig. 2.
Clinton (Rochester) sh. Lockport, N. Y.

TAENIASTER Billings

Taeniaster schohariae Ruedemann

7784 HOLOTYPE *Taeniaster schohariae* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 88, pl. 3, fig. 1.
Schenectady beds Schoharie junction, Schoharie co., N. Y.
R. Ruedemann, coll.

MACHAERIDIA*

LEPIDOCOLEUS Faber

Lepidocoleus jamesi see **Plumulites trentonensis**

Lepidocoleus reinhardi Ruedemann

7785 HOLOTYPE *Lepidocoleus reinhardi* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 76, pl. 23, fig. 5.
Bertie wl. Williamsville, near Buffalo, N. Y.
E. Reinhard, coll.

Lepidocoleus sarlei Clarke

7786 HOLOTYPE (original & counterpart) *Lepidocoleus sarlei* Clarke. Amer. Geol. 1896. v. 17, no. 3, p. 137, pl. 7, fig. 1-6.
Rochester sh. Rochester, N. Y.

PLUMULITES Barrande

Plumulites trentonensis Withers

7787 HYPOTYPE *Plumulites trentonensis* Withers. Cat. Machaeridia (Turrilepas and Its Allies) in Dep't Geol., Brit. Mus. (Nat. Hist.). 1926. p. 60.
Lepidocoleus jamesi Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 145, pl. 25, fig. 1.
Pulaski beds Station 22 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

7788 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 25, fig. 2.
Pulaski beds Station 22 of the Lorraine gulf section, N. Y.
R. Ruedemann, coll.

7789 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 25, fig. 3.
Whetstone Gulf sh.
Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

7790 HYPOTYPE *Plumulites trentonensis* Ruedemann. N. Y. S. M. Bul. 327. 1942. p. 35, fig. 7 (1,2).
Canajoharie sh. Stone Arabia, Montgomery co. N. Y.
Karl A. Pauly, coll. 1937
On slab with type of *Plumulites trentonensis,* fig. 7 (5).

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* In Shimer and Shrock, Index Fossils of North America (1944), *Lepidocoleus* and *Plumulites* are placed under the Cirripedia.

7791 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 7 (3).
Canajoharie sh. Stone Arabia, N. Y.
Karl A. Pauly, coll. 1937
On slab with type of *Plumulites trentonensis,* fig. 7 (6).

7792 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 7 (4).
Canajoharie sh. Stone Arabia, N. Y.
Karl A. Pauly, coll. 1937

7793 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 7 (5).
Canajoharie sh. Stone Arabia, N. Y.
Karl A. Pauly, coll. 1937
On slab with type of *Plumulites trentonensis,* fig. 7 (1, 2).

7794 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 7 (6).
Canajoharie sh. Stone Arabia, N. Y.
Karl A. Pauly, coll. 1937
On slab with type of *Plumulites trentonensis,* fig. 7 (3).

WORMS*

ARTHRARIA Billings

Arthraria magna Ruedemann

7795 COTYPE *Arthraria magna* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 81; p. 82, fig. 65.
Whetstone Gulf sh.
Pulaski section below railroad bridge east of Pulaski, N. Y.
R. Ruedemann, coll.

7796 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 82, fig. 66.
Whetstone Gulf sh.
Pulaski section below railroad bridge east of Pulaski, N. Y.
R. Ruedemann, coll.

ARTHRARIELLA Ruedemann

Arthrariella lorrainensis Ruedemann

7797 HOLOTYPE *Arthrariella lorrainensis* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 83, pl. 10, fig. 7.
Whetstone Gulf formation
Station 9 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

BERTIELLA Ruedemann

Bertiella obesa Ruedemann

7798 HOLOTYPE *Bertiella obesa* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 43, pl. 14, fig. 4.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

7799 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 14, fig. 3.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

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* In Shimer and Shrock, Index Fossils of North America (1944), following Kiderlen (1937) and Knight (1937), *Serpulites* is placed under the Scyphozoa.

CAULOSTREPSIS Clarke

Caulostrepsis taeniola Clarke

7800 COTYPE *Caulostrepsis taeniola* Clarke. N. Y. S. M. Bul. 121. 1908. p. 169, pl. 12, fig. 3.

Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 92; p. 99, fig. 84a (also Yale Univ. Press. New Haven. 1921).
Coblenz ss. Seifen, Germany

CORNULITES Schlotheim

Cornulites sp.

7801 HYPOTYPE: HYPOPLASTOTYPE *Cornulites* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 67, pl. 12, fig. 24.
Moose River ss. Near Blind Cove point, Telos lake, Me.
O. O. Nylander, coll. 1905

Cornulites ? annulatus (Dawson) ?

7802 HYPOTYPE *Serpulites annulatus* Dawson. Acadian Geol. 1868. p. 312.

Cornulites ? annulatus ? Beede. N. Y. S. M. Bul. 149. 1911. p. 176; fig. p. 176.
Mississippian Oyster basin, Coffin isl. Magdalen isl.
J. M. Clarke, coll.

On specimen with types of *Serpula ? infinitesima,* up. fig. p. 176; *Stenopora ?* sp., p. 176.

Cornulites arcuatus Conrad

7803 HYPOTYPE *Cornulites arcuatus* Clarke & Ruedemann. N. Y. S. M., Mem. 5 1903. p. 105, pl. 4, fig. 1.
Guelph dol Rochester, N. Y.
A. L. Arey purchase

7804 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 4, fig. 3.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

7805 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 4, fig. 5.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

Cornulites cingulatus Hall

7806 HYPOTYPE *Cornulites cingulatus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 117, pl. 11, fig. 5.
Grande Grève ls. Grande Grève, P.Q.

Cornulites hopkinsi H. N. Eaton

7807 HOLOTYPE *Cornulites hopkinsi* Eaton. N. Y. S. M. Bul. 253. 1924. p. 114, pl. 1, fig. 3.
Vernon sh. 2 miles east of Jordan, Onondaga co. N. Y.
H. N. Eaton, coll. 1922

Cornulites progressus Ruedemann

7808 HOLOTYPE: HOLOPLASTOTYPE *Cornulites progressus* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 78, pl. 10, fig. 8.
Pulaski formation
Station 22 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

7809 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 10, fig. 9.
Pulaski formation
Bank of Salmon river, 2 miles below Pulaski, N. Y.
R. Ruedemann, coll.

7810 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 10, fig. 10, 11.
Pulaski formation
Station 22 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

DACTYLETHRA Ruedemann

Dactylethra conspicua Ruedemann

7811 HOLOTYPE *Dactylethra conspicua* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 44, pl. 15, fig. 12.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

GITONIA Clarke

Gitonia corallophila Clarke

7812 COTYPE *Gitonia corallophila* Clarke. N. Y. S. M. Bul. 121. 1908. p. 154, pl. 2, fig. 1.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 43; p. 41, fig. 4 (also Yale Univ. Press. New Haven. 1921).
Onondaga ls. Erie co. N. Y.

7813 COTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 2, fig. 2.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 41, fig. 7 (also Yale Univ. Press. New Haven. 1921).
Helderberg beds Helderbergs, New York

7814 COTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 2, fig. 4.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 41, fig. 3 (also Yale Univ. Press. New Haven. 1921).
Onondaga ls. New York State

7815 COTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 2, fig. 5, 6.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 41, fig. 5, 6. (also Yale Univ. Press. New Haven. 1921).
Onondaga ls. Erie co. N. Y.

Gitonia sipho Clarke

7816 COTYPE *Gitonia sipho* Clarke. N. Y. S. M. Bul. 121. 1908. p. 154, pl. 1, fig. 2.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 42; p. 42, fig. 11 (also Yale Univ. Press. New Haven. 1921).
Cobleskill ls. Schoharie, N. Y.

7817 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 40, fig. 2 (also Yale Univ. Press. New Haven. 1921).
Cobleskill ls. Schoharie, N. Y.

HICETES Clarke

Hicetes innexus Clarke

7818 COTYPE *Hicetes innexus* Clarke. N. Y. S. M. Bul. 121. 1908. p. 155, pl. 3, fig. 3.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 48, fig. 28 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Ontario co. N. Y.

7819 COTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 3, fig. 5.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 49, fig. 24 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Ontario co. N. Y.

7820 COTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 3, fig. 6.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 49, fig. 26 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Canandaigua lake, N. Y.

821 cotype Clarke. N. Y. S. M. Bul. 121. 1908. pl. 3, fig. 8.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 51, fig. 31 (also Yale Univ. Press. New Haven. 1921).
Hamilton beds Canandaigua lake, N. Y.

7822 cotype Clarke. N. Y. S. M. Bul. 121. 1908. pl. 4, fig. 1.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 49, fig. 30 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Ontario co. N. Y.

7823 cotype Clarke. N. Y. S. M. Bul. 121. 1908. pl. 4, fig. 2.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 51, fig. 35 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Ontario co. N. Y.

7824 cotype Clarke. N. Y. S. M. Bul. 121. 1908. pl. 4, fig. 3.
Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 51, fig. 38 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Ontario co. N. Y.

7825 hypotype Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 51, fig. 39 (also Yale Univ. Press. New Haven. 1921).
Mid. Devonian **Iowa**

OLDHAMIA Forbes

Oldhamia antiqua Forbes

7826 hypotype *Oldhamia antiqua* Forbes. Jour. Geol. Soc. Dublin. 1848. 4: 20.
Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 1 (2).
Weymouth formation Weymouth, Mass.
B. F. Howell, coll.

Oldhamia occidens Walcott

7827 hypotype *Oldhamia (Murchisonites) occidens* Walcott. U. S. N. M., Pr. 1894. 17: 314.
Ruedemann. N. Y. S. M. Bul. 281. 1929. p. 47; p. 47, fig. 29; fig. 32.
Oldhamia occidens Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 2 (1).
Nassau qtze Nassau, N. Y.
R. Ruedemann, coll. 1926

7828 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 1 (5).
Nassau beds Rensselaer co. N. Y.
R. Ruedemann, coll.

7829 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 2 (2).
Nassau qtze Nassau, N. Y.
R. Ruedemann, coll.

Oldhamia (Murchisonites) occidens see **Oldhamia occidens**

Oldhamia smithi Ruedemann

7830 HOLOTYPE *Oldhamia smithi* Ruedemann. N. Y. S. M. Bul. 327. 1942. p. 8, fig. 1 (3).
Cambrian sh. Township 5, range 8, Penobscot co. Me.
E. S. C. Smith, coll.

7831 PARATYPE Ruedemann. N. Y. S. M. Bul. 327. 1942. fig. 3 (5).
Cambrian sh. Township 5, range 8, Penobscot co. Me.
E. S. C. Smith, coll.

PALAEOSABELLA Clarke

Palaeosabella sp.

7832 HYPOTYPE *Palaeosabella* sp. Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 98, fig. 83 (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

Palaeosabella prisca (McCoy)

7833 HYPOTYPE *Vioa prisca* McCoy. Brit. Paleo. Foss. 1855. p. 260.

Clionolithes (Vioa) priscus Clarke. N. Y. S. M. Bul. 121. 1908. p. 168, pl. 8, fig. 3.

Palaeosabella prisca Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 91; p. 103, fig. 95 (also Yale Univ. Press. New Haven. 1921).
Chemung beds Sideling Hill, Maryland.

7834 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 8, fig. 4.

Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 103, fig. 99 (also Yale Univ. Press. New Haven. 1921).
Chemung beds Allegany co. N. Y.

7835 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 8, fig. 5. Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 103, fig. 98 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. New York State

7836 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 8, fig. 6. Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 103, fig. 100 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. New York State

7837 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 8, fig. 7.
Hamilton sh. New York State

7838 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 8, fig. 8. Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 103, fig. 96 (also Yale Univ. Press. New Haven. 1921).
Oriskany ls. Becraft Mountain, N. Y.

7839 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 9, fig. 1. Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 92, fig. 77 (also Yale Univ. Press. New Haven. 1921).
Grande Grève ls. Grande Grève, Gaspé, P. Q.

7840 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 93, fig. 78 (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

7841 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 94, fig. 79 (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

7842 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 95, fig. 80 (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

7843 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 96, fig. 81 (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

7844 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 97, fig. 82, upper (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

7845 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 97, fig. 82, lower (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

7846 HYPOTYPE Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 103, fig. 101 (also Yale Univ. Press. New Haven. 1921).
Oriskany ss. Knox, N. Y.

PROTONYMPHA Clarke

Protonympha marcellensis Ruedemann

7847 HOLOTYPE (original and counterpart) *Protonympha marcellensis* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 81, pl. 29, fig. 6, 6a, 6b.
Marcellus sh. Near Clarksville, N. Y.
Charles S. Prosser, coll.

PROTOSCOLEX Ulrich

Protoscolex batheri Ruedemann

7848 HOLOTYPE (original and counterpart) *Protoscolex batheri* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 40; p. 40, fig. 27-29; pl. 14, fig. 1.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

7849 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 14, fig. 2.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Protoscolex (?) longus Ruedemann

7850 HOLOTYPE *Protoscolex (?) longus* Ruedemann. G. S. A., Mem. 2. 1934. p. 88, pl. 20, fig. 15.
Snake Hill sh. Dredged from river at Troy, N. Y.
R. Ruedemann, coll. 1902

7851 PARATYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 20, fig. 11.
Snake Hill sh. Dredged from river at Troy, N. Y.
R. Ruedemann, coll. 1902

7852 PARATYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 20, fig. 12.
Snake Hill sh. Dredged from river at Troy, N. Y.
R. Ruedemann, coll. 1902

7853 PARATYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 20, fig. 13.
Snake Hill sh. Dredged from river at Troy, N. Y.
R. Ruedemann, coll. 1902

7854 PARATYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 20, fig. 14.
Snake Hill sh. Dredged from river at Troy, N. Y.
R. Ruedemann, coll. 1902

7855 PARATYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 20, fig. 16.
Snake Hill sh. Dredged from river at Troy, N. Y.
R. Ruedemann, coll. 1902

SERPULA Linné

Serpula ? infinitesima Beede

7856 COTYPE *Serpula ? infinitesima* Beede. N. Y. S. M. Bul. 149. 1911. p. 176; up. fig. p. 176.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

On specimen with types of *Stenopora ?* sp., p. 176; *Cornulites ? annulatus ?,* fig. p. 176.

7857 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. low. fig. p. 176.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

On type of *Martinia glabra,* p. 179.

SERPULITES Murchison

Serpulites sp.

7858 ONOMATYPE *Serpulites* sp. Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 70.
Bertie wl. Near Buffalo, N. Y.
E. Reinhard purchase

Serpulites sp.

7859 HYPOTYPE *Serpulites* sp. Ruedemann. G. S. A., Mem. 2. 1934. p. 88, pl. 20, fig. 6.
Schaghticoke sh. Schaghticoke, N. Y.

Serpulites annulatus see Cornulites ? annulatus ?

Serpulites corrugatus Ruedemann

7860 HOLOTYPE (original and counterpart) *Serpulites corrugatus* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 70, pl. 15, fig. 11.
Rochester sh. Niagara river gorge, N. Y.
E. Reinhard, coll.

Serpulites crassimarginalis Ruedemann

7861 HOLOTYPE *Serpulites crassimarginalis* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 87, pl. 29, fig. 4, 4a.
Utica sh. Holland Patent, N. Y.
Rust Purchase

Serpulites gracilis Ruedemann

7862 HOLOTYPE *Serpulites gracilis* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 87, pl. 28, fig. 7, 7a, 7b.
Utica sh. Holland Patent, N. Y.

7863 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 28, fig. 5.
Canajoharie (Dolgeville) sh. Dolgeville, N. Y.

7864 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 28, fig. 6, 6a, 6b.
Utica sh. Holland Patent, N. Y.

7865 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 28, fig. 8.
Utica sh. Holland Patent, N. Y.

Serpulites intermedius Ruedemann

7866 COTYPE *Serpulites intermedius* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 75; p. 73, fig. 59.
Frankfort sh. Holland Patent, N. Y.
R. Ruedemann, coll.

7867 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 73, fig. 60.
Frankfort sh. Holland Patent, N. Y.
R. Ruedemann, coll.

7868 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 73, fig. 61, 62.
Frankfort sh. Holland Patent, N. Y.
R. Ruedemann, coll.

Serpulites interrogans Ruedemann

7869 COTYPE *Serpulites interrogans* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 86, pl. 29, fig. 1, 1a.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 20, fig. 7, 8.
Deepkill sh. Grant's hollow, near Melrose, N. Y.
R. Ruedemann, coll.

7870 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 29, fig. 2, 2a.
Ruedemann. G. S. A., Mem. 2. 1934. pl. 20, fig. 9, 10.
Deepkill sh. Grant's hollow, near Melrose, N. Y.
R. Ruedemann, coll.

Serpulites longus Ruedemann

7871 HOLOTYPE *Serpulites longus* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 89, pl. 29, fig. 5.
Keokuk beds Crawfordsville, Ind.

Serpulites lumbricoides Ruedemann

7872 HOLOTYPE *Serpulites lumbricoides* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 87, pl. 29, fig. 3, 3a.
Trenton ls. Trenton Falls, N. Y.

Serpulites magnus Ruedemann

7873 HOLOTYPE *Serpulites magnus* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 88, pl. 28, fig. 1, 2.
Canajoharie sh. Menands, Albany co. N. Y.
J. M. Clarke, coll.

Serpulites tener Ruedemann

7874 HOLOTYPE *Serpulites tener* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 88, pl. 28, fig. 3, 4.
Hamilton beds Near Clarksville, N. Y.

SPIRORBIS Lamarck

Spirorbis sp.

7875 HYPOTYPE *Spirorbis* sp. Ruedemann. G. S. A., Mem. 2. 1934. p. 89, pl. 3, fig. 11.
Schaghticoke sh. Schaghticoke, N. Y.
R. Ruedemann, coll. 1902

On slab with types of *Sphenophycus graptolithiferum,* pl. 3, fig. 11; *Magastylia caliciformis,* pl. 7, fig. 10.

Spirorbis sp.

7876 ONOMATYPE *Spirorbis* sp. Beede. N. Y. S. M. Bul. 149. 1911. p. 161.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Productus tenuicostiformis,* low. mid. fig., low. right fig., up. mid. fig., up. right fig., up. left fig., p. 164; *Orbiculoidea* cf. *limata,* p. 161.

Spirorbis angulatus Hall

7877 HYPOTYPE *Spirorbis angulatus* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 112 (advance sheets, 1861).

Clarke. N. Y. S. M. Bul. 121. 1908. p. 159, pl. 2, fig. 8.

Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 43; p. 43, fig. 15 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Canandaigua lake, N. Y.

7878 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 2, fig. 9.

Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 43, fig. 12 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Canandaigua lake, N. Y.

7879 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 2, fig. 10.

Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 43, fig. 14 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Canandaigua lake, N. Y.

7880 HYPOTYPE Clarke. N. Y. S. M. Bul. 121. 1908. pl. 2, fig. 11.

Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 43, fig. 13 (also Yale Univ. Press. New Haven. 1921).
Hamilton sh. Canandaigua lake, N. Y.

Spirorbis latissimus Clarke

7881 COTYPE *Spirorbis latissimus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 117, pl. 11, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

On slab with types of *Spyroceras rhysum,* pl. 13, fig. 3; *Spirorbis latissimus,* pl. 11, fig. 4.

7882 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 11, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

On slab with types of *Spyroceras rhysum,* pl. 13, fig. 3; *Spirorbis latissimus,* pl. 11, fig. 3.

STREPTINDYTES Calvin

Streptindytes cocoenatus Clarke

7883 HOLOTYPE *Streptindytes cocoenatus* Clarke. N. Y. S. M. Bul. 121. 1908. p. 158, pl. 1, fig. 5.

Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 44; p. 44, fig. 16 (also Yale Univ. Press. New Haven. 1921).
Cobleskill ls. Schoharie, N. Y.

Streptindytes compactus Clarke

7884 HYPOTYPE *Streptindytes compactus* Clarke. N. Y. S. M. Bul. 121. 1908. p. 159.

Clarke. N. Y. S. M. Bul. 221-22. 1921. p. 45; p. 45, fig. 19 (also Yale Univ. Press. New Haven. 1921).
Mid. Devonian Iowa

WORM excrementa?

7885 HYPOTYPE Excrementa Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 45, pl. 14, fig. 5.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

WORM trails

7886 HYPOPLASTOTYPE Rosette-shaped *worm* trails Clarke. N. Y. S. M. Bul. 251. 1924. p. 128; mid. fig. on pl. facing p. 130.
Chemung beds Hinsdale, N. Y.

7887 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M. Bul. 251. 1924. left and right fig. on pl. facing p. 130.
Chemung beds Hinsdale, N. Y.

BRYOZOA

Alecto frondosa see **Proboscina** sp. cf. **frondosa**

AMPLEXOPORA Ulrich

Amplexopora persimilis Nickles

7888 HYPOTYPE *Amplexopora persimilis* Nickles. Ky. Geol. Surv., Bul. 1905. 5: 47.

Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 98, pl. 9, fig. 2.

Whetstone Gulf formation

Station 12-13 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Amplexopora cf. **petasiformis** (Nicholson)

7889 HYPOTYPE *Monticulipora (Monotrypa) petasiformis* Nicholson. Genus Monticulipora. 1881. p. 190.

Amplexopora cf. *petasiformis* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 99.

Deer River sh. Allendale, N. Y.
A. F. Foerste, coll.

ASPIDOPORA Ulrich

Aspidopora sp. nov.

7890 HYPOTYPE *Aspidopora* sp. nov. Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 91, pl. 8, fig. 7.

Pulaski sh. Pulaski, N. Y.
R. Ruedemann, coll.

Aspidopora bellula Ulrich & Bassler

7891 HYPOTYPE *Aspidopora bellula* (Ulrich & Bassler ms.) Ruedeman. N. Y. S. M. Bul. 262. 1925. p. 90, pl. 10, fig. 3a, 3b.

Whetstone Gulf formation

Station 17 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

ATACTOPORA Ulrich

Atactopora hirsuta Ulrich

7892 HYPOTYPE: HYPOPLASTOTYPE *Atactopora hirsuta* Ulrich. Cin. Soc. N. H., Jour. 1879. 2:120.

Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 95, pl. 10, fig. 5.

Pulaski drift Near Trenton, N. Y.
Rust purchase

On slab with type of *Paractinoceras lamellosum,* Bul. 272, pl. 14, fig. 6.

BYTHOPORA Miller & Dyer

Bythopora arctipora (Nicholson)

7893 HYPOTYPE: HYPOPLASTOTYPE *Ptilodictya ? arctipora* Nicholson. Ann. and Mag. Nat. Hist., 4th ser. 1875. 15:180.

Bythopora arctipora Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 96, pl. 9, fig. 5, 6.

Whetstone Gulf formation
Station 9 of Wood creek section, N. Y.
R. Ruedemann, coll.

Ceramopora ? beani see **Paleschara beani**

HALLOPORA Bassler

Hallopora andrewsi (Nicholson)

7894 HYPOTYPE *Monticulipora (Heterotrypa) andrewsii* Nicholson. Genus Monticulipora. 1881. p. 128.

Hallopora andrewsi Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 101, pl. 9, fig. 1.

Pulaski sh. Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

HEDERELLA Hall

Hederella sp.

7895 HYPOTYPE: HYPOPLASTOTYPE *Hederella* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 18, 19.

Moose River ss.
Seven miles north of Kineo, Moosehead lake, Me.
O. O. Nylander, coll.

Hederella blainvillei Clarke

7896 HOLOTYPE *Hederella blainvillii* Clarke. N. Y. S. M. Bul. 107. 1907. p. 289; fig. p. 289.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 242, pl. 48, fig. 2.
Bassler. U. S. N. M., Pr. 1939. 87:42, pl. 13, fig. 6.
Gaspé ss. Portage road, Gaspé basin, P. Q.
J. M. Clarke, coll. 1900

HEMIPHRAGMA Ulrich

Hemiphragma bassleri Ruedemann

7897 HOLOTYPE *Hemiphragma bassleri* Ruedemann. N. Y. S. M Bul. 262. 1925. p. 101, pl. 9, fig. 3.
Up. Utica sh. Holland Patent, N. Y.
R. Ruedemann, coll.

7898 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 9, fig. 4.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

LEPTOTRYPA Ulrich

Leptotrypa minima Ulrich

7899 HYPOTYPE: HYPOPLASTOTYPE *Leptotrypa minima* Ulrich. Cin. Soc. N. H., Jour. 1883. 6:159.
Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 96, pl. 10, fig. 4.
Pulaski formation Pulaski, N. Y.
A. Foerste, coll.

Monticulipora (Heterotrypa) andrewsii see Hallopora andrewsi

Monticulipora (Monotrypa) petasiformis see Amplexopora cf. petasiformis

PALESCHARA Hall

"Paleschara" beani (James)

7900 HYPOTYPE *Ceramopora ? beani* James. Paleontologist. 1878. 1: 5.
Paleschara beani Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 105; p. 105, fig. 74.
Whetstone Gulf formation
Station 1 of Wood creek section, N. Y.
Rust purchase

"Paleschara" ulrichi Ruedemann

7901 HOLOTYPE *Paleschara ulrichi* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 90; p. 90, fig. 29.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

PERONOPORA Nicholson

Peronopora cf. **compressa** (Ulrich)

7902 ONOMATYPE *Chaetetes compressus* Ulrich. Cin. Soc. N. H., Jour. 1879. 2: 27.

Peronopora cf. *compressa* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 92.
Lorraine sh. Lorraine village, N. Y.

PHAENOPORA Hall

Phaenopora constellata Hall

7903 MORPHOTYPE *Phaenopora constellata* Hall. Pal. N. Y. 1852. 2: 47.

Newland & Hartnagel. N. Y. S. M. Bul. 123. 1908. pl. 3.
Furnaceville iron ore Ontario, Wayne co. N. Y.

PROBOSCINA Audouin

Proboscina sp. cf. **frondosa** (Nicholson)

7904 HYPOTYPE *Alecto frondosa* Nicholson. Ohio Geol. Surv., Pal. 2. 1875. p. 266.

Proboscina sp. cf. *frondosa* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 89; p. 87, fig. 68.
Whetstone Gulf formation Near Rome, N. Y.
Rust collection

Ptilodictya ? arctipora see **Bythopora arctipora**

SPATIOPORA Ulrich

Spatiopora lineata Ulrich mut. **compacta** Ruedemann

7905 HOLOTYPE *Spatiopora lineata* mut. *compacta* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 90, pl. 10, fig. 6.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Spatiopora lineata Ulrich mut. **hirsuta** Ruedemann

7906 HOLOTYPE (of description) *Spatiopora lineata* mut. *hirsuta* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 90.
Canajoharie (Dolgeville) sh. Dolgeville, N. Y.
R. Ruedemann, coll.

STENOPORA Lonsdale

Stenopora ? sp.

7907 ONOMATYPE *Stenopora ?* sp. Beede. N. Y. S. M. Bul. 149. 1911. p. 176.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

On specimen with types of *Serpula? infinitesima,* fig. p. 176; *Cornulites? annulatus?*, fig. p. 176.

STIGMATELLA Ulrich & Bassler

Stigmatella sp. nov.

7908 HYPOTYPE *Stigmatella* sp. nov. Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 95, pl. 8, fig. 5,6.
Whetstone Gulf formation
Station 12-13 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Stigmatella irregularis (Ulrich)

7909 HYPOTYPE *Chaetetes irregularis* Ulrich. Cin. Soc. N. H., Jour. 1879. 2:129.
Stigmatella irregularis Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 92, pl. 10, fig. 1.
Whetstone Gulf formation
Station 14 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

7910 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 10, fig. 2.
Whetstone Gulf formation
Station 14 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

Stigmatella subsphaerica Ruedemann

7911 HOLOTYPE (original & counterpart) *Stigmatella subsphaerica* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 93; p. 94, fig. 69-71.
Whetstone Gulf formation
Station 12-13 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

STOMATOPORA Bronn

Stomatopora arachnoidea (Hall)

7912 HYPOTYPE *Aulopora arachnoidea* Hall. Pal. N. Y. 1847. 1: 76.

Stomatopora arachnoidea Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 86; p. 87, fig. 67.

Whetstone Gulf formation

Station 1 of Wood creek section, N. Y.

R. Ruedemann, coll.

On slab with type of *Homotelus stegops,* Bul. 272, pl. 22, fig. 3.

BRACHIOPODA

ACROSPIRIFER Wedekind

Acrospirifer cyclopterus (Hall)

8582 HYPOPLASTOTYPE *Spirifer cycloptera* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 58 (description only).
Spirifer cyclopterus Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 178, pl. 32, fig. 15.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8583 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 32, fig. 20.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8584 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 32, fig. 21.
Grande Grève ls. Grande Grève, P. Q.
Charles Schuchert, coll.

Acrospirifer gaspensis (Billings)

7913 HYPOTYPE *Spirifera gaspensis* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 44.
Spirifer gaspensis Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 235, pl. 31, fig. 29.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

7914 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 30.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

7915 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 31.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

7916 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 32.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

7917 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 33.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.
Type in U. S. N. M.

7918 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 35.
Gaspé ss. Gaspé basin, P. Q.

7919 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 36.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

7920 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 37, 38.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

Acrospirifer murchisoni (Castelnau)

7921 HYPOTYPE *Spirifer murchisoni* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 177, pl. 32, fig. 1.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1903

7922 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 32, fig. 2.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

7923 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 32, fig. 3.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1903

7924 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 32. fig. 4.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1903

7925 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt. 1. 1908. pl. 32, fig. 5.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

7926 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 32, fig. 7, 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Acrospirifer primaevus (Steininger) var. **atlanticus** (Clarke)

7927 COTYPE *Spirifer primaevus* var. *atlanticus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 260; fig. p. 261.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 82, pl. 19, fig. 5.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.

7928 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 261.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 6.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.

7929 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 261.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 7.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.
On slab with type of *Acrospirifer primaevus* var. *atlanticus,* pl. 19, fig. 10.

7930 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 8; pl. 20, fig. 7.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.

7931 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 9.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.
On slab with types of *Spirifer perimele,* pl. 18, fig. 20, 21.

7932 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 10.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.
On slab with type of *Acrospirifer primaevus* var. *atlanticus,* pl. 19, fig. 7.

7933 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 11.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.

7934 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 12.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.

7935 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 6.
Moose River ss. Moosehead lake, Me.
O. O. Nylander, coll. 1905

ACROTRETA Kutorga

Acrotreta bisecta Matthew

7936 HYPOTYPE *Acrotreta bisecta* Matthew. New Brunswick Nat. Hist. Soc., Bul. 4, pt 4. 1901. p. 275.
Acrotreta cf. *sagittalis* Ruedemann. G. S. A., Mem. 2. 1934. p. 80, pl. 17, fig. 1.
Schaghticoke sh. Schaghticoke, Rensselaer co. N. Y.
R. Ruedemann, coll.
On slab with types of *Sphenophycus graptolithiferum, Staurograptus dichotomus,* pl. 2.

Acrotreta cf. **sagittalis** see **Acrotreta bisecta**

AMPHIGENIA Hall

Amphigenia parva (Clarke)

7937 COTYPE *Rensselaeria (Amphigenia) parva* Clarke. N. Y. S. M. Bul. 107. 1907. p. 247; fig. p. 247.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 81, pl. 18, fig. 7.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.

7938 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 247.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 8.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

7939 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 247.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 9.
Moose River ss. Stony brook, Moose river, Me.
O. O. Nylander, coll. 1905

7940 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 10.
Moose River ss. Stony brook, Moose river, Me.
O. O. Nylander, coll. 1905

7941 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 11.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Amphigenia parva,* pl. 18, fig. 12, 13.

7942 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 12.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Amphigenia parva,* pl. 18, fig. 11, 13.

7943 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 13.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slabs with types of *Amphigenia parva,* pl. 18, fig. 11, 12.

Anomites glabra see **Martinia glabra**

ANOPLIA Hall & Clarke

Anoplia nucleata (Hall)

7944 HYPOTYPE *Anoplia nucleata* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 211, pl. 41, fig. 15.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

7945 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

7946 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

ATHYRIS McCoy

Athyris sp.

7947 MORPHOTYPE *Athyris* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (D).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

Athyris angelica Hall

7948 MORPHOTYPE *Athyris angelica* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (J).
Machias beds Two miles east of Scio, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

Athyris hera Clarke

7949 HOLOPLASTOTYPE *Athyris hera* Clarke. N. Y. S. M. Bul. 107. 1907. p. 253; fig. p. 253.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 236, pl. 34, fig. 14.
Gaspé ss. Gaspé basin, P. Q.
Charles Schuchert, coll.
Type in U. S. N. M.

7950 PARAPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 253.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 13.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

Atrypa elongata see **Rensselaeria elongata**

Atrypa nucleus see **Triplecia nucleus**

Atrypa peculiaris see **Costellirostra peculiaris**

Atrypa pleiopleura see **Plethorhyncha pleiopleura**

ATRYPINA Hall & Clarke

Atrypina sp. ?

7951 HYPOTYPE: HYPOPLASTOTYPE *Atrypina* sp.? Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 109, pl. 29, fig. 18.
St Alban beds Griffon Cove river, P. Q.
J. M. Clarke, coll.

AUSTINELLA Foerste

Austinella sp. cf. whitfieldi (N. H. Winchell)

7952 HYPOTYPE: HYPOPLASTOTYPE *Orthis whitfieldi* N. H. Winchell. Minn. Geol. and Nat. Hist. Surv., Ann. Rep't 9. 1881. p. 115.
Plectorthis sp. cf. *whitfieldi* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 92, pl. 4, fig. 8.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

AUSTRALINA Clarke

Australina jachalensis Clarke

7953 COTYPE *Australina jachalensis* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 347; p. 347, fig. 1.
Silurian Lomas de los Piojas, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors?

7954 COTYPE Clarke. Mon do Serv. Geol. e Min. do Brasil. 1913. 1: 347, fig. 2.
Silurian Gualilan, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors?

7955 COTYPE: COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 347, fig. 3.
Silurian Gualilan, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors?

7956 COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 348, right fig.
Silurian Gualilan, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors?

7957 COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 348, left fig.
Silurian Gualilan, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors?

AUSTRALOSPIRIFER Caster

Australospirifer antarcticus (Morris & Sharpe)

7958 HYPOTYPE: HYPOPLASTOTYPE *Spirifer antarcticus* Morris & Sharpe. Geol. Soc. London, Quart. Jour. 1846. 2: 276.
Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 258, pl. 18, fig. 1.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 22, fig. 2.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors
On slab with type of *Australospirifer antarcticus,* pl. 18, fig. 13.

7959 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. de Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 2.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 22, fig. 1.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors

7960 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 5.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors

7961 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 6, 9.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 22, fig. 4, 6.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors
On slab with types of *Leptocoelia flabellites,* pl. 22, fig. 23, 24; *Australospirifer antarcticus,* pl. 18, fig. 10-12.

7962 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 10.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors
On slab with types of *Leptocoelia flabellites,* pl. 22, fig. 23, 24; *Australospirifer antarcticus,* pl. 18, fig. 6, 9, 11, 12.

7963 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 11.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors
On slab with types of *Leptocoelia flabellites,* pl. 22, fig. 23, 24; *Australospirifer antarcticus,* pl. 18, fig. 6, 9, 10, 12.

7964 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 12.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 22, fig. 7.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors

On slab with types of *Leptocoelia flabellites,* pl. 22, fig. 23, 24; *Australospirifer antarcticus,* pl. 18, fig. 6, 9-11.

7965 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 13.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors

On slab with type of *Australospirifer antarcticus,* pl. 18, fig. 1.

7966 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 15.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 22, fig. 8.
Devonian Port Louis, East Falkland
Thore Halle, donor

7967 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 16.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 22, fig. 9.
Devonian Port Louis, East Falkland
Thore Halle, donor

Australospirifer hawkinsi (Morris & Sharpe)

7968 HYPOTYPE *Spirifer hawkinsii* Morris & Sharpe. Geol. Soc. London, Quart. Jour. 1846. 2: 276.

Spirifer hawkinsi Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 262, pl. 18, fig. 17.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 22, fig. 11.
Devonian Port Louis, East Falkland
Thore Halle, don.

7969 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 18, fig. 18.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 22, fig. 10.
Devonian Port Louis, East Falkland
Thore Halle, don.

Australospirifer iheringi (Kayser)

7970 HYPOTYPE *Spirifer iheringi* Kayser. Alguns Foss. Paleo. do Estado Paraná: Revista do Museu Paulista. 1900. 4: 303.
Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 243, pl. 21, fig. 11.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 25, fig. 4.
Devonian Tybagy, Paraná, Brazil
Dr I. C. White, don.

7971 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 21, fig. 12, 13.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 25, fig. 3.
Devonian Tybagy, Paraná, Brazil
Dr I. C. White, don.

Australospirifer lauro-sodreanus (Katzer)

7972 HYPOTYPE *Spirifer lauro-sodreanus* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46: 7.
Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 236, pl. 21, fig. 9, 10.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 25, fig. 1, 2.
Maecurú ss. Rio Maecurú, Pará, Brazil
Morgan expedition collection
O. A. Derby and J. M. Clarke, coll. 1906

AUSTRALOSTROPHIA Caster

Australostrophia mesembria (Clarke)

7973 COTYPE *Leptostrophia ?? mesembria* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 286, pl. 22, fig. 33.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 27, fig. 14.
Devonian Fox bay, West Falkland
Thore Halle, don.

7974 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 34.
Devonian Fox bay, West Falkland
Thore Halle, don.

7975 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 35.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 27, fig. 15.
Devonian Fox bay, West Falkland
Thore Halle, don.

7976 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 36, 40.
Devonian Jaguariahyva, Paraná, Brazil
Dr I. C. White, don.

BEACHIA Hall & Clarke

Beachia amplexa Clarke

7977 HOLOTYPE *Beachia amplexa* Clarke. N. Y. S. M. Bul. 107. 1907. p. 248; figures p. 248.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 166, pl. 26, fig. 14, 15, 16.
Grande Grève ls. Percé rock, Percé, P. Q.

7978 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 17.
Grande Grève ls. Percé rock, Percé, P. Q.

Beachia thunei (Clarke)

7979 HOLOTYPE *Megalanteris thunii* Clarke. N. Y. S. M. Bul. 107. 1907. p. 250; figures p. 250.
Megalanteris thunei Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 168, pl. 26, fig. 12, 13.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

7980 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

7981 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

7982 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 27, fig. 8.
Grande Grève ls. Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

7983 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 27, fig. 9.
Grande Grève ls. Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

7984 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 27, fig. 10.
Grande Grève ls. Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

BRACHYPRION Shaler

Brachyprion fascifer (Kayser)

7985 HYPOTYPE *Tropidoleptus fascifer* Kayser. Zeitschr. Deutsch. Geol. Gesell. 1897. p. 291.
Brachyprion fascifer Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 337; p. 339, fig. 1.
Silurian
Lomas de los Piojos, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors

7986 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 339, fig. 2.
Silurian
Lomas de los Piojos, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors?
On slab with type of *Brachyprion fascifer,* p. 339, fig. 3.

7987 HYPOTYPE: HYPOPLASTOTYPE (2 specimens used in combination) Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 339, fig. 3.
Silurian
Lomas de los Piojos, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors?
On slab with type of *Brachyprion fascifer,* p. 339, fig. 2.

7988 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 339, fig. 4.
Silurian Quebrada del Jume, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors

7989 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 339, fig. 5.
Silurian
Lomas de los Piojos, Jachal, San Juan, Argentina

Brachyprion major Clarke

7990 HYPOTYPE *Brachyprion majus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 190, pl. 36, fig. 1.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

7991 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

7992 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 3.
Grande Grève ls. Grande Grève, P. Q
J. M. Clarke, coll.

7993 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

7994 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt. 1. 1908. pl. 36, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

7995 HYPOTYPE *Stropheodonta (Brachyprion) major* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 45, pl. 9, fig. 13, 15.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

7996 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 9, fig. 14.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

Brachyprion majus see Brachyprion major

Brachyprion schuchertanum Clarke

7997 HYPOTYPE *Stropheodonta (Brachyprion) schuchertana* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 45, pl. 9, fig. 7, 8, 9.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

7998 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 9, fig. 12.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

BRACHYSPIRIFER Wedekind

Brachyspirifer pedroanus (Hartt)

7999 HYPOTYPE *Spirifer pedroana* Hartt (in Rathbun). Buffalo Soc. Nat. Sci., Bul. 1874. v. 1, no. 4, p. 237.

Spirifer katzeri Clarke (in error) = *Spirifer pedroanus* Derby (in Clarke). Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pp. 241, 242, pl. 21, fig. 1, 2.

Spirifer katzeri Clarke (in error). N. Y. S. M. Bul. 164. 1913. pl. 26, fig. 1, 2.
Maecurú ss. Rio Maecurú, Pará, Brazil
Morgan expedition collection
O. A. Derby and J. M. Clarke, donors. 1906

8000 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 21, fig. 3.
Maecurú ss. Rio Maecurú, Pará, Brazil
Morgan expedition collection
O. A. Derby and J. M. Clarke, donors. 1906

8001 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 21, fig. 4.
Maecurú ss. Rio Maecurú, Pará, Brazil
Morgan expedition collection
O. A. Derby and J. M. Clarke, donors. 1906

CAMAROTOECHIA Hall & Clarke

Camarotoechia sp.

8002 HYPOTYPE *Camarotoechia* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 112, pl. 30, fig. 2.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

Camarotoechia allegania (Williams)

8003 MORPHOTYPE *Rhynchonella allegania* Williams. U. S. G. S., Bul. 41. 1887. p. 87.

Camarotoechia allegania Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 19A (A, B).
Oswayo beds Near Little Genesee "Rock City", N. Y.
J. G. Woodruff, coll. & don. 1934

Camarotoechia contracta (Hall)

8004 MORPHOTYPE *Camarotoechia contracta* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (D).
Machias beds South of Friendship, N. Y.
J. G. Woodruff, coll. & don. 1934

8005 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (E).
Machias beds South of Friendship, N. Y.
J. G. Woodruff, coll. & don. 1934

8006 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (G).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll: & don. 1934

8007 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (A).
Hinsdale beds
About 1 mile southeast of Whitesville, N. Y.
J. G. Woodruff, coll. & don. 1934

Camarotoechia cf. contracta (Hall)

8008 MORPHOTYPE *Camarotoechia* cf. *contracta* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (E).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

Camarotoechia dryope (Billings)

8009 HYPOTYPE *Rhynchonella dryope* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 37.
Camarotoechia dryope Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 170, pl. 28, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8010 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 112. pl. 30, fig. 1.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

Camarotoechia cf. duplicata see Pugnoides cf. duplicatus

"Camarotoechia" (?) humilis Ruedemann

8011 HOLOTYPE *Camarotoechia (?) humilis* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 132, pl. 12, fig. 22.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

8012 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 23.
Up. Utica sh. Holland Patent, N. Y.
Haskell purchase

8013 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 13, fig. 9, 10.
Frankfort sh. Quaker hill, near Northwestern, N. Y.
R. Ruedemann, coll.

On slab with type of *Camarotoechia (?) humilis,* pl. 13, fig. 11, 12.

8014 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 13, fig. 11, 12.
Frankfort sh. Quaker hill, near Northwestern, N. Y.
R. Ruedemann, coll.

On slab with type of *Camarotoechia (?) humilis,* pl. 13, fig. 9, 10.

8015 PARATYPE (of description) Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 133.
Deer River sh. Copenhagen, N. Y.
R. Ruedemann, coll. 1916

Camarotoechia (?) neglecta see Stegerhynchus neglectum

CENTRONELLA Billings

Centronella glansfagea (Hall)

8016 HYPOTYPE *Centronella glansfagea* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 163, pl. 25, fig. 1, 2, 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8017 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

CHONETES Fischer de Waldheim

Chonetes antiope see Eodevonaria antiopa

Chonetes (Eodevonaria) antiopa see Eodevonaria antiopa

Chonetes arcuata see Eodevonaria arcuata

Chonetes (Eodevonaria) cf. arcuata see Eodevonaria arcuata

Chonetes aroostookensis Clarke

8018 COPLASTOTYPE *Chonetes aroostookensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 264; fig. p. 264.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 120, pl. 30, fig. 21.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8019 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 264.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 22.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8020 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 20.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8021 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 23.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8022 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 24.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8023 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 25.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

Chonetes billingsi Clarke

8024 COTYPE: COPLASTOTYPE *Chonetes billingsi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 266; fig. p. 267.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 209, 238, pl. 41, fig. 19.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8025 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 267.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 29.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8026 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 267.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 30.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8027 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 18.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8028 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 20.
Grande Grève ls. Grande Grève, P. Q
J. M. Clarke, coll.

8029 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 21, 22.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8030 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 23.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8031 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 25, 26.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8032 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 27.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8033 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 28.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Chonetes canadensis Billings

8034 HYPOTYPE *Chonetes canadensis* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 17.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 205, pl. 45, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8035 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 18.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8036 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 20.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8037 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 21.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8038 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 22.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8039 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 23.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

8040 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 25.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8041 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 26.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

8042 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 27.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8043 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 86, pl. 21, fig. 1.
Moose River ss. Misery stream, town of Sandwich, Me
O. O. Nylander, coll. 1905

8044 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 2.
Moose River ss. Misery stream, town of Sandwich, Me
O. O. Nylander, coll. 1905

8045 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 3.
Moose River ss. Misery stream, town of Sandwich, Me
O. O. Nylander, coll. 1905

8046 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 4.
Moose River ss. Misery stream, town of Sandwich, Me
O. O. Nylander, coll. 1905

Chonetes dawsoni see **Chonostrophia dawsoni**

Chonetes falklandicus Morris & Sharpe

8047 HYPOTYPE: HYPOPLASTOTYPE *Chonetes falklandica* Morris & Sharpe. Geol. Soc. London, Quart. Jour. 1846. 2: 274.

Chonetes falklandicus Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 295, pl. 24, fig. 1.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 29, fig. 1.
Devonian Port Louis, East Falkland
Thore Halle, don.

On slab with types of *Chonetes falklandicus,* pl. 24, fig. 2; *Proetus* sp., pl. 4, fig. 23.

8048 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 2.
Devonian Port Louis, East Falkland
Thore Halle, don.

On slab with types of *Chonetes falklandicus,* pl. 24, fig. 1; *Proetus* sp., pl. 4, fig. 23.

8049 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 3.
Devonian Port Louis, East Falkland
Gov. & Mrs Allardyce, donors

On slab with types of *Chonetes falklandicus,* pl. 24, fig. 4, 5.

8050 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 4.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 29, fig. 3.
Devonian Port Louis, East Falkland
Gov. & Mrs Allardyce, donors

On slab with types of *Chonetes falklandicus,* pl. 24, fig. 3, 5.

8051 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 5.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 29, fig. 2.
Devonian Port Louis, East Falkland
Gov. & Mrs Allardyce, donors

On slab with types of *Chonetes falklandicus,* pl. 24, fig. 3, 4.

8052 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 6.
Bokkeveld beds Montagu, Cape Colony, South Africa
E. H. L. Schwarz, don.

On slab with types of *Leptocoelia flabellites,* pl. 22, fig. 29, 31; *Chonetes falklandicus,* pl. 24, fig. 7.

8053 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e. Min. do Brasil. 1913. v. 1, pl. 24, fig. 7.
Bokkeveld beds Montagu, Cape Colony, South Africa
E. H. L. Schwarz, don.

On slab with types of *Leptocoelia flabellites,* pl. 22, fig. 29, 31; *Chonetes falklandicus,* pl. 24, fig. 6.

Chonetes freitasi Rathbun

8054 HYPOTYPE *Chonetes freitasii* Rathbun. Boston Soc. Nat. Hist., Pr. 1878. 20:18.

Chonetes freitasi Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 271, pl. 12, fig. 3a.

Mid. Devonian: Ereré group Ereré, Brazil

8055 HYPOTYPE Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. pl. 12, fig. 3b.

Mid. Devonian: Ereré group Ereré, Brazil

Chonetes hallei Clarke

8056 HOLOTYPE *Chonetes hallei* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 293, pl. 24, fig. 34.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 30, fig. 1.

Devonian Spring Point, West Falkland
Thore Halle, don.

Chonetes highlandensis Clarke

8057 COTYPE *Chonetes highlandensis* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 144, pl. 34, fig. 32.

Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Eodevonaria arcuata,* pl. 34, fig. 24, 30; *Prionothyris diobolaris,* pl. 34, fig. 5.

8058 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2, 1909. pl. 34, fig. 33.

Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8059 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 34.

Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8060 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 35.

Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8061 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 36.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8062 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 37.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8063 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 38.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8064 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 39.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8065 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 40.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8066 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 41.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Chonetes hudsonicus see **Eodevonaria hudsonica**

Chonetes (Eodevonaria) hudsonicus see **Eodevonaria hudsonica**

Chonetes (Eodevonaria) hudsonicus metatype **gaspensis** see **Eodevonaria hudsonica** metatype **gaspensis**

Chonetes impensus Clarke

8067 HOLOTYPE: HOLOPLASTOTYPE *Chonetes impensus* Clarke. N. Y S. M. Bul. 107. 1907. p. 263; fig. p. 263.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 85, pl. 20, fig. 29.
Moose River ss.
Seven miles north of Kineo bay, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Chonetes melonicus see **Eodevonaria melonica**

Chonetes nectus Clarke

8070 COTYPE: COPLASTOTYPE *Chonetes nectus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 263; fig. p. 264.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 86, pl. 20, fig. 22.

Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Chonetes nectus,* pl. 20, fig. 23, 24, 25.

8071 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 264.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 23.

Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Chonetes nectus,* pl. 20, fig. 22, 24, 25.

8072 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 264.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 24.

Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Chonetes nectus,* pl. 20, fig. 22, 23, 25.

8073 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 264.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 25.

Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Chonetes nectus,* pl. 20, fig. 22, 23, 24.

Chonetes paucistria Clarke

8074 HOLOTYPE *Chonetes paucistria* Clarke. N. Y. S. M. Bul. 107. 1907. p. 266; figures p. 266.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 122, pl. 30, fig. 26, 27.

Chapman ss.

Edmunds hill, Chapman plantation, Aroostook co. Me.

O. O. Nylander, coll.

Chonetes skottsbergi Clarke

8075 COTYPE *Chonetes skottsbergi* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 291, pl. 24, fig. 26.

Devonian Port Salvador, West Falkland

Thore Halle, don.

On slab with types of *Chonetes skottsbergi,* pl. 24, fig. 28, 32.

8076 COTYPE: COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 27.

Devonian Port Salvador, West Falkland

Thore Halle, don.

On slab with type of *Chonetes skottsbergi,* pl. 24, fig. 30.

8077 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 28.

Devonian Port Salvador, West Falkland

Thore Halle, don.

On slab with types of *Chonetes skottsbergi,* pl. 24, fig. 26, 32.

8078 COTYPE: COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 29.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 29, fig. 12.

Devonian Port Salvador, West Falkland

Thore Halle, don.

8079 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 30.

Devonian Port Salvador, West Falkland

Thore Halle, don.

On slab with type of *Chonetes skottsbergi,* pl. 24, fig. 27.

8080 COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 31.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 29, fig. 9.

Devonian Port Salvador, West Falkland

Thore Halle, don.

8081 COTYPE: COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 32.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 29, fig. 11.

Devonian Port Salvador, West Falkland

Thore Halle, don.

On slab with types of *Chonetes skottsbergi,* pl. 24, fig. 26, 28.

8082 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 24, fig. 33.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 29, fig. 10.

Devonian Port Salvador, West Falkland

Thore Halle, don.

CHONOSTROPHIA Hall & Clarke

Chonostrophia complanata (Hall)

8083 HYPOTYPE *Chonostrophia complanata* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 210, pl. 46, fig. 7.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll.

8084 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 8, 9, 10.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll.

8085 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 11.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll.

8086 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 12, 13.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll.

Chonostrophia dawsoni (Billings)

8087 HYPOPLASTOTYPE *Chonetes dawsoni* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 18.
Chonostrophia dawsoni Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 240, pl. 46, fig. 14.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8088 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 15, 16, 17.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8089 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 19.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.
On slab with type of *Eodevonaria hudsonicus* metatype *gaspensis*, pl. 45, fig. 14.

8090 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 20.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8091 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 21.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8092 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 22.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8093 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 23.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll. 1904

8094 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 24.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8095 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 87, pl. 20, fig. 30.
Moose River ss.
Seven miles north of Kineo bay, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8096 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 31.
Moose River ss. Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

8097 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 32.
Moose River ss.
Seven miles north of Kineo bay, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8098 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 33.
Moose River ss.
Seven miles north of Kineo bay, Moosehead lake, Me.
O. O. Nylander, coll. 1905

CLINTONELLA Hall & Clarke

Clintonella bodenbenderi (Kayser)

8099 HYPOTYPE: HYPOPLASTOTYPE *Liorhynchus bodenbenderi* Kayser. Zeitschr. Deutsch. Geol. Gesell. 1897. p. 292.
Clintonella bodenbenderi Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 341; p. 343, fig. 1-5.
Silurian Lomas de los Piojos, Jachal, San Juan, Argentina
Keidel and Stappenbeck, donors?

Clitambonites americanus see **Vellamo ruedemanni**

Clitambonites ruedemanni see **Vellamo ruedemanni**

COELOSPIRA Hall

Coelospira concava (Hall)

8100 HYPOTYPE *Coelospira concava* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 175, pl. 29, fig. 22.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

COMPOSITA Brown

Composita dawsoni (Hall & Clarke)

8101 ONOMATYPE *Seminula dawsoni* Hall & Clarke. Pal. N. Y. 1894. v. 8, pt 2, p. 364.
Composita dawsoni Beede. N. Y. S. M. Bul. 149. 1911. p. 180.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

Conchyliolithus anomites sacculus see **Dielasma sacculus**

COSTELLIROSTRA Cooper

Costellirostra peculiaris (Conrad)

8102 HYPOTYPE *Atrypa peculiaris* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 5. 1841. p. 56.
Eatonia peculiaris Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 172, 234, pl. 29, fig. 1, 2.
Gaspé ss. Three miles northwest of Gaspé basin, P. Q.
J. M. Clarke, coll. 1904

8103 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 3, 4.
Grande Grève ls.
Shore of Gaspé basin near Indian cove, P. Q.
J. M. Clarke, coll. 1900

8104 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 5, 9, 10.
Grande Grève ls.
Cape Rosier road near Grande Grève, P. Q.

8105 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 6, 8.
Grande Grève ls.
Cape Rosier road, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8106 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 7.
Grande Grève ls.
Cape Rosier road, Grand Grève, P. Q.
J. M. Clarke, coll. 1900

8107 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 11.
Grande Grève ls.
Shore of Gaspé basin, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

COSTISPIRIFER Cooper

Costispirifer arenosus (Conrad)

8108 HYPOTYPE *Spirifer arenosus* Hall & Clarke. Pal. N. Y. 1894. v. 8, pt 2, pl. 29, fig. 2.
Oriskanian Cayuga, Ont.

8109 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 179, pl. 33, fig. 2.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

8110 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 33, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8111 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 33, fig. 4.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

8112 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 33, fig. 5.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8113 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 33, fig. 6.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8114 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 33, fig. 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8115 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 33, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8116 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 33, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8117 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 33, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8118 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 83, pl. 19, fig. 1.
Moose River ss.
Cunningham's camp, Matagamon lake, Me.
O. O. Nylander, coll. 1905

8119 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 2, 3.
Moose River ss.
Cunningham's camp, Matagamon lake, Me.
O. O. Nylander, coll. 1905

8120 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 19, fig. 4.
Moose River ss.
Cunningham's camp, Matagamon lake, Me.
O. O. Nylander, coll. 1905

CRANIA Retzius

Crania sp.

8121 MORPHOTYPE *Crania* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (C).
Wellsville beds
2½ miles north of Elm Valley, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934
On slab with type of *Leptodesma* cf. *potens,* fig. 9 (E).

Crania laelia see **Philhedra laelia**

Crania pulchella Hall & Clarke

8122 HYPOTYPE: HYPOPLASTOTYPE *Crania pulchella* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 212, pl. 47, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

8123 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 47, fig. 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Craniella (?) grandegrevensis see **Petrocrania (?) grandegrevensis**

CRANIOPS Hall

Craniops cf. **ovata** (Hall)

8410 HYPOTYPE *Pholidops* cf. *ovata* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 212, pl. 47, fig. 10, 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

CRYPTONELLA Hall

Cryptonella (?) ellsi Clarke

8126 HOLOTYPE *Cryptonella (?) ellsi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 237; figures p. 237.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 163, pl. 25, fig. 8, 9, 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Cryptonella (?) fausta Clarke

8127 HYPOTYPE *Cryptonella (?) fausta* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 164, pl. 25, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8128 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8129 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

CYMOSTROPHIA Caster

Cymostrophia patersoni (Hall) protype bonamica (Clarke)

8130 HOLOTYPE *Stropheodonta patersoni* protype *bonamica* Clarke. N. Y. S. M. Bul. 107. 1907. p. 270; figures p. 271.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 44, pl. 9, fig. 4, 5, 6.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

8131 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 9, fig. 1, 2, 3.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

Cymostrophia patersoni (Hall) protype praecedens (Clarke)

8132 COTYPE *Stropheodonta patersoni* protype *praecedens* Clarke. N. Y. S. M. Bul. 107. 1907. p. 269; fig. p. 269.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 186, pl. 35, fig. 5.
Grande Grève ls. Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

8133 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 269.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 7.
Grande Grève ls.
Shore of Gaspé basin near Indian Cove, P. Q.
J. M. Clarke, coll. 1900

8134 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 3.
Grande Grève ls. Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

8135 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 4, 6.
Grande Grève ls.
Cape Rosier road near Bartlett's, Grande Grève, P. Q.
J. M. Clarke, coll. 1900
On slab with type of *Cymostrophia patersoni* protype *praecedens,* pl. 35, fig. 13.

8136 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt. 1. 1908. pl. 35, fig. 8.
Grande Grève ls. Little Gaspé, P. Q.
J. M. Clarke, coll. 1900

8137 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 9.
Grande Grève ls.
Shore of Gaspé basin near Indian cove, P. Q.
J. M. Clarke, coll. 1900

8138 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 10.
Grande Grève ls.
Shore of Gaspé basin near Indian cove, P. Q.
J. M. Clarke, coll. 1900

8139 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 11.
Grande Grève ls.
Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

8140 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 13.
Grande Grève ls.
On Cape Rosier road near Bartlett's, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

On slab with type of *Cymostrophia patersoni* protype *praecedens,* pl. 35, fig. 4, 6.

Cyrtia rostrata see Cyrtina rostrata

CYRTINA Davidson

Cyrtina chalazia Clarke

8141 HOLOTYPE *Cyrtina chalazia* Clarke. N. Y. S. M. Bul. 107. 1907. p. 262; figures p. 262.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 40, pl. 7, fig. 30, 31, 32.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8142 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 7, fig. 27, 28, 29.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Cyrtina rostrata (Hall)

8143 HYPOTYPE *Cyrtia rostrata* Hall. N .Y. S. Cab. Nat. Hist., Ann Rep't 10. 1857. p. 64 (description only).
Cyrtina rostrata Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 183, pl. 31, fig. 26, 27.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8144 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 28.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

CYRTOSPIRIFER Nalivkin

Cyrtospirifer disjunctus (Sowerby)

8145 MORPHOTYPE *Spirifer disjunctus* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (B).
Machias beds Two miles east of Scio, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

8146 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (C, F).
Machias beds Two miles east of Scio, N. Y.
J. G. Woodruff, coll. & don. 1934

8147 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (H).
Machias beds South of Friendship, N. Y.
J. G. Woodruff, coll. & don. 1934

8148 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (H).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

8149. MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (J).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

8150 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (H).
Wellsville beds
One mile east of Andover, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

8151 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (J).
Wellsville beds One mile east of Andover, N. Y.
J. G. Woodruff, coll. & don. 1934

8152 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (L).
Wellsville beds 2½ miles north of Elm Valley, N. Y.
J. G. Woodruff, coll. & don. 1934

8153 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12 (D).
Whitesville beds 1½ miles northwest of Andover, N. Y.
J. G. Woodruff, coll. & don. 1934

DALMANELLA Hall & Clarke

Dalmanella cf. **circularis** see **Platyorthis** cf. **circularis**

"Dalmanella" sp. cf. **concinna** (Hall)

8154 HYPOTYPE *Orthis concinna* Hall. Pal. N. Y. 1859. 3:172.
Dalmanella sp. cf. *concinna* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 44, fig. 1, 2, 3.
St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll. 1900

8155 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 44, fig. 4, 5.
St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll.

"Dalmanella" drevermanni Clarke

8156 COPLASTOTYPE *Dalmanella drevermanni* Clarke. N. Y. S. M. Bul. 107. 1907. p. 286; fig. p. 286.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 125, pl. 31, fig. 10.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8157 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 286.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 11.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8158 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 286.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 12.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8159 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 14.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8160 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 15.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Dalmanella cf. **elegantula** see **Parmorthis** cf. **elegantula**

"Dalmanella" fultonensis Foerste mut. **lorrainensis** Ruedemann

8161 HOLOTYPE: HOLOPLASTOTYPE *Dalmanella fultonensis* mut. *lorrainensis* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 119, pl. 12, fig. 7.
Whetstone Gulf sh.
Station 17 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

"Dalmanella" fultonensis Foerste mut. **rotunda** Ruedemann

8162 COTYPE: COPLASTOTYPE *Dalmanella fultonensis* mut. *rotunda* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 120, pl. 12, fig. 4.
Whetstone Gulf sh.
Station 12 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

On slab with types of *Dalmanella fultonensis* mut. *rotunda,* pl. 12, fig. 5, 6.

8163 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 5.
Whetstone Gulf sh.
Station 12 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

On slab with types of *Dalmanella fultonensis* mut. *rotunda,* pl. 12, fig. 4, 6.

8164 COTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 6.
Whetstone Gulf sh.
Station 12 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

On slab with types of *Dalmanella fultonensis* mut. *rotunda,* pl. 12, fig. 4, 5.

Dalmanella lucia see **Platyorthis lucia**

Dalmanella multisecta see **Resserella multisecta**

"Dalmanella" penouili Clarke

8168 COTYPE: COPLASTOTYPE *Dalmanella penouili* Clarke. N. Y. S. M. Bul. 107. 1907. p. 285; figures p. 286.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 242, pl. 43, fig. 1, 3.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8169 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 286.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 2.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8170 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 4.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

"Dalmanella testudinaria" (Dalman)

8171 HYPOTYPE *Orthis testudinaria* Dalman. Kgl. Svenska Vet.-Akad., Handl. 1828. p. 115.

Dalmanella testudinaria Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 105, fig. 105 left (also Yale Univ. Press. New Haven. 1921).
Pulaski formation Erratic block near Trenton, N. Y.
Rust collection

8172 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M. Bul. 221-222. 1921. p. 105, fig. 105 right (also Yale Univ. Press. New Haven. 1921).
Pulaski formation Erratic block near Trenton, N. Y.
Rust collection

DELTHYRIS Dalman

Delthyris mesacostalis see **Tylothyris mesacostalis**

Delthyris perlamellosa (Hall)

8173 HYPOTYPE *Spirifer perlamellosa* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 57.

Spirifer perlamellosus Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 40, pl. 8, fig. 18, 20.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8174 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 8, fig. 19.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

DERBYINA Clarke

Derbyina sp. ?

8175 HYPOTYPE: HYPOPLASTOTYPE *Derbyina* sp. ? Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 17, fig. 28.
Devonian Port Louis, E. Falkland
Dr Thore G. Halle, don.

Derbyina jamesiana (Rathbun)

8176 HYPOTYPE *Retzia jamesiana* (Hartt) Rathbun. Buffalo Soc. Nat. Sci., Bul. 1874. 1: 243.

Derbyina jamesiana Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 216, pl. 17, fig. 27.
Devonian: Maecurú group Rio Maecurú, Pará, Brazil
Morgan expedition collection
O. A. Derby and J. M. Clarke, donors, 1906

DIELASMA King

Dielasma sacculus (Martin)

8177 HYPOTYPE *Conchyliolithus anomites sacculus* Martin. Petrefacta Derbiensia. 1809. tab. 46.

Dielasma sacculus Beede. N. Y. S. M. Bul. 149. 1911. fig. p. 167.

Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Aviculopecten lyelli,* low. right fig. p. 172; *Productus dawsoni,* fig. p. 162; *Productus dawsoni* var. *acadicus,* fig. p. 162.

DINOBOLUS Hall

"Dinobolus" canadensis (Billings)

8178 HYPOTYPE: HYPOPLASTOTYPE *Obolus canadensis* Billings. Can. Nat. and Geol. 1858. 3: 441.

Dinobolus canadensis Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 72, pl. 24, fig. 13, 14.

Watertown ls. Watertown, N. Y.

DINORTHIS Hall & Clarke

Dinorthis (Plaesiomys) cf. porcata (McCoy)

8179 HYPOTYPE: HYPOPLASTOTYPE *Orthis porcata* McCoy. Sil. Foss. Ireland. 1846. p. 32.

Plaesiomys cf. *porcata* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 93, pl. 4, fig. 13.

Snake Hill beds Snake Hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Dinorthis (Retrorsirostra) retrorsa (Salter)

8180 HYPOTYPE: HYPOPLASTOTYPE *Orthis retrorsa* Salter. Great Britain Geol. Surv., Mem. 1858. 2: 373.

Plaesiomys retrorsa Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 93, pl. 4, fig. 9, 12.

Snake Hill beds Snake Hill, Saratoga co. N. Y.
R. Ruedemann, coll.

8181 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 4, fig. 10.

Snake Hill beds Snake Hill, Saratoga co. N. Y.
R. Ruedemann, coll.

8182 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 4, fig. 11.
Snake Hill beds Snake Hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Discina tenuistriata see **Orbiculoidea tenuistriata**

Discina truncata see **Schizobolus truncatus**

Eatonia peculiaris see **Costellirostra peculiaris**

ELYTHA Fredericks

Elytha fimbriata (Conrad)

8183 HYPOTYPE *Spirifer fimbriatus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 180, pl. 32, fig. 11, 12, 13.
Oriskany (Glenerie) ls. Glenerie, N. Y.
Gilbert Van Ingen, coll. 1903

EODEVONARIA Breger

Eodevonaria antiopa (Billings)

8184 HYPOTYPE *Chonetes antiope* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 19.
Chonetes (Eodevonaria) antiopa Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 208, pl. 45, fig. 1.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8185 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 2.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8186 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 3.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8187 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 4.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

Eodevonaria arcuata (Hall)

8188 HYPOPLASTOTYPE *Chonetes arcuata* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 116.

Chonetes (Eodevonaria) cf. *arcuata Clarke.* N. Y. S. M., Mem. 9, pt 2. 1909. p. 144, pl. 34, fig. 21.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8189 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 22.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8190 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 23.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with type of *Goniophora cercurus,* pl. 33, fig. 19.

8191 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 24.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Eodevonaria arcuata,* pl. 34, fig. 30; *Prionothyris diobolaris,* pl. 34, fig. 5; *Chonetes highlandensis,* pl. 34, fig. 32.

8192 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 25.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8193 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 26.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8194 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 27.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8195 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 28.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8196 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 29.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8197 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 30.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Eodevonaria arcuata,* pl. 34, fig. 24; *Chonetes highlandensis,* pl. 34, fig. 32; *Prionothyris diobolaris,* pl. 34, fig. 5.

8198 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 31.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Eodevonaria hudsonica (Clarke)

8199 HYPOTYPE *Chonetes (Eodevonaria) hudsonicus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 86, pl. 20, fig. 26.
Moose River ss. Stony brook, Moose river, Me.
O. O. Nylander, coll. 1905

8200 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 27.
Moose River ss. Stony brook, Moose river, Me.
O. O. Nylander, coll. 1905

8201 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 28.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Eodevonaria hudsonica (Clarke) metatype **gaspensis** (Clarke)

8202 COPLASTOTYPE *Chonetes (Eodevonaria) hudsonicus* metatype *gaspensis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 240, pl. 45, fig. 6, 10.
Gaspé ss. Gaspé basin, P. Q.
Type in U. S. N. M.

8203 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 7, 12.
Gaspé ss. Gaspé basin, P. Q.
Type in U. S. N. M.

8204 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 11.
Gaspé ss. Gaspé basin, P. Q.

8205 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 14.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll. 1900

On slab with type of *Chonostrophia dawsoni,* pl. 46, fig. 19.

8206 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 45, fig. 15.
Gaspé ss. Gaspé basin, P. Q.

Eodevonaria melonica (Billings)

8068 HYPOPLASTOTYPE *Chonetes melonica* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 15.

Chonetes melonicus Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 206, pl. 46, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8069 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 46, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

ETYMOTHYRIS Cloud

Etymothyris gaspensis (Clarke)

8207 HOLOTYPE *Rensselaeria ovoides* var. *gaspensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 238; fig. p. 238.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 164, 234, pl. 25, fig. 18.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll. 1904

8208 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 238.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 17.
Grande Grève ls. Gaspé bay, P. Q.
J. M. Clarke, coll. 1904

8209 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 238.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 5.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

8210 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

8211 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 13.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8212 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 15.
Grande Grève ls. Gaspé bay, P. Q.
J. M. Clarke, coll. 1904

8213 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 21.
Grande Grève ls. Gaspé bay, P. Q.

8214 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 22.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

8215 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 25, fig. 23, 24.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8216 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 1.
Gaspé ss. Gaspé basin, Gaspé, P. Q.

8217 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 2.
Gaspé ss. Gaspé basin, Gaspé, P. Q.

8218 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 3.
Gaspé ss. Gaspé basin, Gaspé, P. Q.

8219 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 4.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll. 1903

Eunoa accola see Oxlosia accola

GASPESIA Clarke

Gaspesia aurelia (Billings)

8220 HYPOPLASTOTYPE *Orthis aurelia* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 34.
Gaspesia aurelia Clarke. N. Y. S. M. Bul. 107. 1907. p. 277; fig. p. 277.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 198, pl. 40, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8221 HYPOPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 277.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 19.
Grande Grève ls. Grande Grève, P. Q.
Charles Schuchert, coll.

Type in U. S. N. M.

GLOBITHYRIS Cloud

Globithyris callida (Clarke)

8222 HOLOTYPE *Rensselaeria callida* Clarke. N. Y. S. M. Bul. 107. 1907. p. 241; figures p. 241.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 79, pl. 17, fig. 15, 16, 17.

Moose River ss. Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

8223 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. figures p. 241.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 17, fig. 13, 14.

Moose River ss. Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

Globithyris diania (Clarke)

8224 COTYPE *Rensselaeria diania* Clarke. N. Y. S. M. Bul. 107. 1907. p. 242; fig. p. 242.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 80, pl. 18, fig. 4.

Moose River ss. Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

8225 COTYPE Clarke. N. Y. S. M., Bul. 107. 1907. fig. p. 242.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 5.

Moose River ss. Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

8226 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 242.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 6.

Moose River ss. Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

GLOSSINA Phillips

Glossina acer Clarke

8227 HOLOPLASTOTYPE *Glossina acer* Clarke. N. Y. S. M. Bul. 107. 1907. p. 288; fig. p. 288.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 214, pl. 47, fig. 8.

Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8228 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 47, fig. 7, 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

GLYPTORTHIS Foerste

Glyptorthis crispata (Emmons)

8229 HYPOTYPE *Orthis crispata* Emmons. Geol. N. Y., Rep't 2d Dist. 1842. p. 404.
Glyptorthis crispata Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 121, pl. 12, fig. 8.
Pulaski sh. Station 23 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

8230 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 9.
Pulaski sh. Station 23 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

8231 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 10, 11.
Whetstone Gulf formation
Station 20 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

8232 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 12.
Whetstone Gulf formation
Station 20 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

HEMIPTYCHINA Waagen

Hemiptychina? waageni Beede

8233 COTYPE *Hemiptychina? waageni* Beede. N. Y. S. M. Bul. 149. 1911. p. 178; left fig. p. 179.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

8234 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. left and right mid. figures p. 179.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll

8235 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. right fig. p. 179.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

HIPPARIONYX Vanuxem

Hipparionyx minor Clarke

8236 COTYPE: COPLASTOTYPE *Hipparionyx minor* Clarke. N. Y. S. M. Bul. 107. 1907. p. 278; fig. p. 279.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 124, pl. 31, fig. 16.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8237 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 279.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 18.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8238 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 279.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 20.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8239 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 17, 22.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8240 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 19.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8241 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 21.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

Hipparionyx proximus Vanuxem

8242 HYPOTYPE *Hipparionyx proximus* Clarke. N. Y. S. M., Mem 9, pt 1. 1908. p. 200, pl. 42, fig. 6.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll. 1904

8243 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 42, fig. 7, 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8244 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 42, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8245 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 42, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8246 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 88, pl. 21, fig. 12.
Moose River ss.
Cunningham's camp, Matagamon lake, Me.
O. O. Nylander, coll. 1905

HOWELLELLA Kozlowski

Howellella crispa (Hisinger)

8124 HYPOTYPE *Spirifer crispus* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 42, pl. 4, fig. 12, 13, 18.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

8125 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 4, fig. 15.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

LEPTAENA Dalman

Leptaena argentina (Thomas)

8247 HYPOTYPE *Stropheodonta argentina* Thomas. Zeitschr. Deutsch. Geol. Gesell. 1905. 57: 261.
Leptaena argentina Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:340; p. 341, fig. 1.
Silurian Cerro del Fuerte, Jachal, San Juan, Argentina
Keidel & Stappenbeck, donors

8248 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:341, fig. 2.
Silurian Cerro del Fuerte, Jachal, San Juan, Argentina
Keidel & Stappenbeck, donors

Leptaena concava see Leptaenisca concava

Leptaena planumbona see Strophomena cf. planumbona

Leptaena rhomboidalis (Wilckens)

8249 HYPOTYPE *Leptaena rhomboidalis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 111, 183, pl. 34, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8250 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 45, pl. 10, fig. 3, 4.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

8251 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 10, fig. 5.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll.

8252 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 10, fig. 6.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll.

Leptaena rhomboidalis (Wilckens) var. ventricosa (Hall)

8253 HYPOTYPE *Strophomena depressa* var. *ventricosa* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 55 (description only).
Leptaena rhomboidalis var. *ventricosa* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 87, pl. 21, fig. 17.
Moose River ss. West side of Matagamon lake, Me.
O. O. Nylander, coll. 1905

Leptaena sericea see **Sowerbyella sericea**

Leptaena sericea var. **rugosa** see **Sowerbyella rugosa**

LEPTAENISCA Beecher

Leptaenisca concava (Hall)

8254 HYPOTYPE *Leptaena concava* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 47 (description only).
Leptaenisca concava Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 46, pl. 10, fig. 7.
Dalhousie beds — Dalhousie, N. B.
J. M. Clarke, coll.

8255 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 10, fig. 10, 11.
Dalhousie beds — Dalhousie, N. B.
J. M. Clarke, coll.

LEPTOBOLUS Hall

Leptobolus insignis Hall mut. **latus Ruedemann**

8256 HOLOTYPE *Leptobolus insignis* mut. *latus* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 107, pl. 11, fig. 15.
Deer River sh.
Allendale bridge, at lower end of Lorraine gulf, N. Y.
R. Ruedemann, coll.

8257 PARATYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 16.
Deer River sh.
Allendale bridge, at lower end of Lorraine gulf, N. Y.
R. Ruedemann, coll

LEPTOCOELIA Hall

Leptocoelia flabellites (Conrad)

8258 HYPOPLASTOTYPE *Leptocoelia flabellites* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 174, 235, pl. 29, fig. 23.
Gaspé ss. — Gaspé basin, P. Q.
J. M. Clarke, coll.

On slab with type of *Leptocoelia flabellites,* pl. 29, fig. 28.

8259 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 24.
Gaspé ss. — Gaspé basin, P. Q.
J. M. Clarke, coll.

On slab with type of *Leptocoelia flabellites,* pl. 29, fig. 25.

8260 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 25.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

On slab with type of *Leptocoelia flabellites,* pl. 29, fig. 24.

8261 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 26.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8262 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 27, 29.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8263 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 28.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

On slab with type of *Leptocoelia flabellites,* pl. 29, fig. 23.

8264 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 81, pl. 20, fig. 15.
Moose River ss. Moosehead lake, Me.

8265 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 16.
Moose River ss. Moosehead lake, Me.

8266 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 17,18.
Moose River ss. Moosehead lake, Me.

8267 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 19.
Moose River ss. Moosehead lake, Me.

8268 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 142, pl. 34, fig. 17.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8269 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 18.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8270 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 19.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8271 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 20.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8272 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 269, pl. 22, fig. 23.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors

On slab with types of *Leptocoelia flabellites,* pl. 22, fig. 24; *Australospirifer antarcticus,* pl. 18, fig. 6, 9-12.

8273 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 24.
Devonian Port Louis, East Falkland
Gov. and Mrs Allardyce, donors

On slab with types of *Leptocoelia flabellites,* pl. 22, fig. 23; *Australospirifer antarcticus,* pl. 18, fig. 6, 9-12.

8274 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 27.
Bokkeveld beds Ceres, Cape Colony, South Africa
E. H. L. Schwarz, don.

8275 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 29.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 27, fig. 9.
Bokkeveld beds Montagu, Cape Colony, South Africa
E. H. L. Schwarz, don.

On slab with types of *Chonetes falklandicus,* pl. 24, fig. 6, 7; *Leptocoelia flabellites,* pl. 22, fig. 31.

8276 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 30.
Devonian Fox bay, West Falkland
Thore Halle, don.

8277 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 31.
Bokkeveld beds Montagu, Cape Colony, South Africa
E. H. L. Schwarz, don.
On slab with types of *Chonetes falklandicus,* pl. 24, fig. 6, 7; *Leptocoelia flabellites,* pl. 22, fig. 29.

8278 HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 22, fig. 32.
Devonian Fox bay, West Falkland
Thore Halle, don.

LEPTOSTROPHIA Hall & Clarke

Leptostrophia blainvillii see **Protoleptostrophia blainvillii**

Leptostrophia concinna (Morris & Sharpe)

8279 HYPOTYPE: HYPOPLASTOTYPE *Orthis concinna* Morris & Sharpe. Geol. Soc. London, Quart. Jour. 1846. 2: 275.
Leptostrophia concinna Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 285, pl. 23, fig. 1.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 28, fig. 2.
Devonian Port Louis, East Falkland
Thore Halle, don.

8280 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 23, fig. 2.
Devonian Port Louis, East Falkland
Thore Halle, don.

8281 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 23, fig. 3.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 28, fig. 3.
Devonian Port Louis, East Falkland
Thore Halle, don.

8282 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 23, fig. 4.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 28, fig. 1.
Devonian Port Louis, East Falkland
Thore Halle, don.

Leptostrophia irene (Billings)

8283 HYPOTYPE *Strophomena irene* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 27.
Leptostrophia irene Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 193, pl. 38, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8284 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 39, fig. 5, 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8285 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 39, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8286 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 39, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Leptostrophia magnifica (Hall)

8287 HYPOPLASTOTYPE *Leptostrophia magnifica* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 190, pl. 38, fig. 1.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8288 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 38, fig. 2; pl. 39, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8289 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 39, fig. 10.
St Albans beds Cape Rosier cove, P. Q.
J. M. Clarke, coll.

8290 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 87, pl. 20, fig. 20.
Moose River ss. Matagamon lake dam, Me.
O. O. Nylander, coll. 1905

8291 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 21.
Moose River ss. Matagamon lake dam, Me.
O. O. Nylander, coll. 1905

8292 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 15.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

8293 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 16.
Moose River ss. Stony brook, Moose river, Me.
O. O. Nylander, coll. 1905

Leptostrophia magnifica (Hall) protype **parva** Clarke

8294 COTYPE: COPLASTOTYPE *Leptostrophia magnifica* protype *parva* Clarke. N. Y. S. M. Bul. 107. 1907. p. 274; fig. p. 275.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 123, pl. 31, fig. 5, 7.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8295 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 275.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 8.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8296 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 275.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 9.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8297 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 6.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

Leptostrophia magnifica (Hall) var. tullia (Billings)

8298 HYPOTYPE *Strophomena tullia* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 29.
Leptostrophia magnifica var. *tullia* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 191, pl. 37, fig. 1.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904
On slab with types of *Leptostrophia magnifica* var. *tullia,* pl. 37, fig. 2, 5.

8299 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 37, fig. 2.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904
On slab with types of *Leptostrophia magnifica* var. *tullia,* pl. 37, fig. 1, 5.

8300 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 37, fig. 3.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8301 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 37, fig. 4.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

8302 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 37, fig. 5.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904
On slab with types of *Leptostrophia magnifica* var. *tullia,* pl. 37, fig. 1, 2.

Leptostrophia ?? mesembria see Australostrophia mesembria

Leptostrophia oriskania Clarke

8303 HYPOTYPE: HYPOPLASTOTYPE *Leptostrophia oriskania* Clarke. N. Y. S. M., Mem. 9, pt. 1. 1908. p. 194, pl. 36, fig. 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8304 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8305 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8306 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8307 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8308 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8309 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8310 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8311 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 15.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8312 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8313 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8314 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 18.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8315 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 87, pl. 21, fig. 13.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

On slab with type of *Leptostrophia oriskania,* pl. 21, fig. 14.

8316 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 14.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

On slab with type of *Leptostrophia oriskania,* pl. 21, fig. 13.

Leptostrophia tardifi Clarke

8317 COTYPE *Leptostrophia tardifi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 273; fig. p. 274.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 195, pl. 39, fig. 1, 4.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

8318 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 39, fig. 2, 3.
Grande Grève ls. Percé rock, P. Q.

LINGULA Bruguière

Lingula bisulcata Ulrich

8319 HYPOTYPE *Lingula bisulcata* Ulrich. Amer. Geol. 1889. 3:380.

Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 108, pl. 11, fig. 3.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8320 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig 4.
Whetstone Gulf formation
Station 13 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

Lingula clarkei Flower

8321 HOLOTYPE *Lingula elliptica* Clarke (name preoccupied). N. Y. S. M. Bul. 107. 1907. p. 288; right fig. p. 288.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 47, fig. 4.
Lingula clarkei Flower. Jour. Pal. 1945. v. 19, no. 1, p. 76.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Lingula eboria Beede

8322 HOLOTYPE *Lingula eboria* Beede. N. Y. S. M. Bul. 149. 1911. p. 177; fig. p. 177.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

Lingula elliptica (name preoccupied) see **Lingula clarkei**

Lingula elliptica (in error) see **Lingula spathata**

Lingula lamellata Hall

8323 HYPOTYPE *Lingula lamellata* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 46, pl. 15, fig. 1.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Lingula lepta Clarke

8324 COTYPE *Lingula lepta* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1 : 308, pl. 26, fig. 4.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 32, fig. 4.
Devonian Ponta Grossa, Paraná, Brazil
Dr I. C. White, don.

Lingula media Ruedemann

8325 HOLOTYPE (of description) *Lingula media* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 48.
Bertie wl. Buffalo, N. Y.
E. Reinhard purchase

Lingula philograptolitha Ruedemann

8326 HOLOTYPE *Lingula philograptolitha* Ruedemann. G. S. A., Mem. 2. 1934. p. 77, pl. 19, fig. 5.
Deepkill sh. Deep kill, N. Y.
R. Ruedemann, coll. 1901

8327 PARATYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 19, fig. 4.
Deepkill sh. Stuyvesant, N. Y.
R. Ruedemann & W. Goldring, coll. 1927

Lingula quebecensis Billings

8328 HYPOTYPE *Lingula quebecensis* Billings. Can. G. S., Paleo. Foss. 1865. 1: 72 (advance sheets, 1862).
Ruedemann. G. S. A., Mem. 2. 1934. p. 77, pl. 19, fig. 6.
Deepkill sh. Deep kill, near Melrose, N. Y.
R. Ruedemann & H. S. Mattimore, coll. 1901

Lingula rectilatera Hall

8329 HYPOTYPE *Lingula rectilatera* Hall. Pal. N. Y. 1859. 3:156.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 214, pl. 47, fig. 3.
Grande Grève ls. Percè rock, P. Q.
J. M. Clarke, coll. 1904

8330 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 47, fig. 5, 6.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

Lingula rectilateralis Emmons

8331 TOPOTYPE: TOPOPLASTOTYPE (original & counterpart) *Lingula rectilateralis* Emmons. Geol. N. Y., Rep't 2d Dist. 1842. p. 399.
Lingula (Pseudolingula) rectilateralis Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 109, pl. 11, fig. 1.
Whetstone Gulf sh. Rodman, near Watertown, N. Y.
R. Ruedemann, coll.

8332 TOPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 2.
Whetstone Gulf sh. Rodman, near Watertown, N. Y.
R. Ruedemann, coll.

Lingula rectilateralis see **Lingula rectilateralis** mut. **major**

Lingula (Pseudolingula) rectilateralis see **Lingula rectilateralis**

Lingula rectilateralis Emmons mut. **major** Ruedemann

8333 HYPOTYPE: HYPOPLASTOTYPE *Lingula rectilateralis* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 91, pl. 4, fig. 1.
Lingula (Pseudolingula) rectilateralis mut. *major* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 110.
Schenectady beds. Dettbarn quarry, Schenectady, N. Y.
R. Ruedemann, coll.

Lingula (Pseudolingula) rectilateralis mut. **major** see **Lingula rectilateralis** mut. **major**

Lingula semina Ruedemann

8334 COTYPE *Lingula semina* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 67, pl. 24, fig. 5.
Pittsford sh. Pittsford, Monroe co. N. Y.
C. J. Sarle purchase, 1899
On slab with type of *Lingula semina,* pl. 24, fig. 6.

8335 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 24, fig. 6.
Pittsford sh. Pittsford, Monroe co. N. Y.
C. J. Sarle purchase, 1899
On slab with type of *Lingula semina,* pl. 24, fig. 5.

Lingula spathata Hall

8336 HYPOTYPE *Lingula spathata* Hall. Pal. N. Y. 1859. 3:157.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 214, pl. 47, fig. 1.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1903

8337 HYPOTYPE *Lingula elliptica* Clarke (in error). N. Y. S. M. Bul. 107. 1907. fig. p. 288 (left fig.).
Lingula spathata Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 47, fig. 2.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1903

Lingula subtrigona Ruedemann

8338 COTYPE *Lingula subtrigona* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 69, pl. 24, fig. 9.
Bertie wl. East of road from Union Springs to Cross Roads station, Cayuga co. N. Y.
D. D. Luther, coll. 1899

8339 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 24, fig. 10.
Bertie wl. East of road from Union Springs to Cross Roads station, Cayuga co. N. Y.
D. D. Luther, coll. 1899

Lingula testatrix Ruedemann

8340 COTYPE *Lingula testatrix* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 67, pl. 24, fig. 7.
Bertie wl. Litchfield, N. Y.

8341 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 24, fig. 8.
Bertie wl. Litchfield, N. Y.

Lingula vernoni H. N. Eaton

8342 HOLOTYPE (original & counterpart) *Lingula vernoni* Eaton. N. Y. S. M. Bul. 253. 1924. p. 114; pl. facing p. 116, fig. 1, 2.
Vernon sh. Two miles east of Jordan, Onondaga co. N. Y.
H. N. Eaton, coll. 1922

Lingula vicina Ruedemann

8343 HOLOTYPE *Lingula vicina* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 68, pl. 24, fig. 11, 12.
Pittsford wl. Farmer's Mills, near Utica, N. Y.
G. Van Ingen exchange, 1911

LINGULASMA Ulrich

Lingulasma (?) elongatum Ruedemann

8344 HOLOTYPE *Lingulasma (?) elongatum* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 69; p. 70, fig. 31.
Schenectady beds Dettbarn quarry, Schenectady, N. Y.
R. Ruedemann, coll.

Liorhynchus bodenbenderi see **Clintonella bodenbenderi**

MARTINIA McCoy

Martinia glabra (Martin)

8345 ONOMATYPE *Anomites glabra* Martin. Petrefacta Derbiensia. 1809.

Martinia glabra Beede. N. Y. S. M. Bul. 149. 1911. p. 179.

Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

Serpula ? infinitesima, low. fig. p. 176, is parasitic on this specimen.

Megalanteris diobolaris see **Prionothyris diobolaris**

Megalanteris ovalis see **Prionothyris perovalis**

Megalanteris cf. **ovalis** see **Prionothyris** cf. **ovalis**

Megalanteris thunii see **Beachia thunei**

MENDATHYRIS Cloud

Mendathyris mainensis (Williams)

8346 HYPOTYPE *Rennsselaeria mainensis* Williams. U. S. G. S., Bul. 165. 1900. pt 1, p. 80.

Rensselaeria atlantica Clarke. N. Y. S. M. Bul. 107. 1907. p. 243; figures p. 244.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 112, pl. 29, fig. 13, 14, 15.

Chapman ss. Presque Isle stream, Chapman plantation,
Aroostook co. Me.
O. O. Nylander, coll. 1905

8347 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 1, 2, 7.

Chapman ss. Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8348 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 3.

Chapman ss. Edmunds hill, Chapman plantation,
Aroostook co. Me.
O. O. Nylander, coll. 1905

8349 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 4.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8350 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 6.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8351 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2, 1909. pl. 29, fig. 8.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8352 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 9, 10.
Chapman ss. Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8353 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 11.
Chapman ss. Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8354 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 12.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8355 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 16.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8356 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 17.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8357 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 29, fig. 18.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Merista lata see **Meristella lata**

MERISTELLA Hall

Meristella champlaini Clarke

8358 COTYPE *Meristella champlaini* Clarke. N. Y. S. M. Bul. 107. 1907. p. 251; fig. p. 251.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 175, pl. 30, fig. 5, 6, 7.
Grande Grève ls.
Shore of Gaspé basin near Indian cove, P. Q.
J. M. Clarke, coll.

8359 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 251.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 30, fig. 8, 9, 10.
Grande Grève ls. Gaspé basin, Grande Grève, P. Q.
J. M. Clarke, coll.

8360 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt. 1. 1908. pl. 30, fig. 1, 2, 3, 4.
Grande Grève ls.
Shore of Gaspé basin near Indian cove, P. Q.
J. M. Clarke, coll.

8361 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 30, fig. 12.
Grande Grève ls. Gaspé basin, Grande Grève, P. Q.
J. M. Clarke, coll.

8362 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 30, fig. 14, 15.
Grande Grève ls. Near Grande Grève, P. Q.
J. M. Clarke, coll.

8363 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 30, fig. 16, 17.
Grande Grève ls.
Shore of Gaspé basin near Indian cove, P. Q.
J. M. Clarke, coll.

8364 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 30, fig. 19.
Grande Grève ls. ?Gaspé bay, P. Q.
J. M. Clarke, coll.

8365 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 30, fig. 20.
Grande Grève ls. Gaspé bay, P. Q.
J. M. Clarke, coll.

Meristella lata (Hall)

8366 HYPOTYPE *Merista lata* Hall. Pal. N. Y. 1859. 3: 431.
Meristella lata Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 177, pl. 30, fig. 21, 22, 23.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

8367 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 30, fig. 24, 25.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8368 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 30, fig. 26.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Metaplasia plicata see **Spirifer plicatus**

Obolus canadensis see **Dinobolus canadensis**

OEHLERTELLA Hall & Clarke

Oehlertella sp.

8369 MORPHOTYPE *Oehlertella* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (K).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

Orbicula baini see **Orbiculoidea baini**

Orbicula terminalis see **Trematis terminalis**

ORBICULOIDEA d'Orbigny

Orbiculoidea sp.

8370 HYPOTYPE *Orbiculoidea* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 48, pl. 11, fig. 14.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

Orbiculoidea sp. ?

8371 HYPOTYPE *Orbiculoidea* sp.? Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 213, pl. 47, fig. 19.
Grande Grève ls. Shiphead, P. Q.
J. M. Clarke, coll. 1900

8372 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 47, fig. 20.
Grande Grève ls. Shiphead, P. Q.
J. M. Clarke, coll.

Orbiculoidea sp.

8373 MORPHOTYPE *Orbiculoidea* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (B).
Wellsville beds
Three miles north of Elm Valley, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

Orbiculoidea cf. **ampla** (Hall) and **Orbiculoidea** cf. **siegenensis** Kayser

8374 HYPOTYPE *Orbiculoidea* cf. *ampla* (Hall) and cf. *siegenensis* Kayser. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 126, pl. 31, fig. 23.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8375 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 24.
Chapman ss. Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

Orbiculoidea baini (Morris & Sharpe)

8376 HYPOTYPE *Orbicula baini* Morris & Sharpe. Geol. Soc. London, Quart. Jour. 1846. 2: 277.
Orbiculoidea baini Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 301, pl. 25, fig. 9.
Devonian Ponta Grossa, Paraná, Brazil
Morgan expedition collection
O. A. Derby & J. M. Clarke, donors, 1906

Orbiculoidea bertiensis Ruedemann

8377 COTYPE *Orbiculoidea bertiensis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 46; p. 46, fig. 30.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

8378 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 46, fig. 31.
Bertie wl. Sweet's quarry, Marcellus, N. Y.
D. D. Luther, coll.

Orbiculoidea bodenbenderi Clarke

8379 COTYPE *Orbiculoidea bodenbenderi* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1 : 304; fig. p. 306.
Devonian Near Warrah, West Falkland
Gov. and Mrs Allardyce, donors

8380 COTYPE: COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 25, fig. 17, 20.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 30, fig. 12.
Devonian Ponta Grossa, Paraná, Brazil
Morgan expedition collection
O. A. Derby & J. M. Clarke, donors, 1906

8381 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 25, fig. 18.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 30, fig. 11.
Devonian Ponta Grossa, Paraná, Brazil
Morgan expedition collection
O. A. Derby & J. M. Clarke, donors, 1906

Orbiculoidea conica see **Schizotreta conica**

Orbiculoidea limata Beede

8382 COTYPE *Orbiculoidea limata* Beede. N. Y. S. M. Bul. 149. 1911. p. 177; left fig. p. 177.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

On slab with counterpart of *Conularia sorrocula,* figures p. 184.

8383 COTYPE: COPLASTOTYPE Beede. N. Y. S. M. Bul. 149. 1911. right fig. p. 177.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Conularia sorrocula,* figures p. 184; *Schizodus cuneus,* fig. p. 182.

Orbiculoidea cf. limata Beede

8384 ONOMATYPE *Orbiculoidea* cf. *limata* Beede. N. Y. S. M. Bul. 149. 1911. p. 161.
Mississippian
Cape le Trou, Grindstone isl., Magdalen isl
J. M. Clarke, coll.

On slab with types of *Spirorbis* sp., p. 161; *Productus tenuicostiformis,* low. mid. fig., low. right fig., up. left fig., up. mid. fig., up. right fig., p. 164.

Orbiculoidea molina Ruedemann

8385 HOLOTYPE: HOLOPLASTOTYPE *Orbiculoidea molina* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 71, pl. 24, fig. 1.
Pittsford wl. Farmer's Mills, near Utica, N. Y.
G. Van Ingen, coll.

On slab with types of *Orbiculoidea molina,* pl. 24, fig. 2, 3, 4.

8386 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 24, fig. 2.
Pittsford wl. Farmer's Mills, near Utica, N. Y.
G. Van Ingen, coll.

On slab with types of *Orbiculoidea molina,* pl. 24, fig. 1, 3, 4.

8387 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 24, fig. 3.
Pittsford wl. Farmer's Mills, near Utica, N. Y.
G. Van Ingen, coll.

On slab with types of *Orbiculoidea molina,* pl. 24, fig. 1, 2, 4.

8388 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 24, fig. 4.
Pittsford wl. Farmer's Mills, near Utica, N. Y.
G. Van Ingen, coll.

On slab with types of *Orbiculoidea molina,* pl. 24, fig. 1, 2, 3.

Orbiculoidea montis Clarke

8389 HOLOTYPE *Orbiculoidea montis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 287; figures p. 287.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 213, pl. 47, fig. 21, 22.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8390 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 47, fig. 23.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1903

8391 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 47, fig. 24.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

Orbiculoidea scutulum Ruedemann

8392 HOLOTYPE (original & counterpart) *Orbiculoidea scutulum* Ruedemann. G. S. A., Mem. 2. 1934. p. 81, pl. 17, fig. 16.
Deepkill sh. Stuyvesant Landing, N. Y.
R. Ruedemann & W. Goldring, coll. 1927

Orbiculoidea cf. **siegenensis** see **Orbiculoidea** cf. **ampla**

Orbiculoidea tenuistriata (Ulrich)

8393 HYPOTYPE *Discina tenuistriata* Ulrich. Cin. Soc. N. H., Jour. 1878. 1: 96.
Orbiculoidea tenuistriata Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 91, pl. 4, fig. 2.
Frankfort sh. Frankfort gulf, N. Y.
R. Ruedemann, coll.

ORTHIS Dalman

"Orthis" sp.

8394 HYPOTYPE *Orthis* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 125, pl. 31, fig. 13.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

Orthis aurelia see **Gaspesia aurelia**

Orthis circularis see **Platyorthis** cf. **circularis**

Orthis concinna Hall see **Dalmanella** sp. cf. **concinna**

Orthis concinna Morris & Sharpe see **Leptostrophia concinna**

Orthis crispata see **Glyptorthis crispata**

Orthis deformis see **Schuchertella deformis**

Orthis emacerata var. **multisecta** see **Resserella multisecta**

Orthis lucia see **Platyorthis lucia**

Orthis musculosa see **Rhipidomella musculosa**

Orthis porcata see **Dinorthis (Plaesiomys)** cf. **porcata**

Orthis retrorsa see **Dinorthis (Retrorsirostra) retrorsa**

Orthis sulivani see **Schuchertella sulivani**

Orthis testudinaris see **Dalmanella testudinaria**

Orthis whitfieldi see **Austinella** sp. cf. **whitfieldi**

ORTHOSTROPHIA Hall

Orthostrophia canadensis Clarke

8395 COTYPE *Orthostrophia canadensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 285; fig. p. 285.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 112, pl. 43, fig. 5.

St Alban beds Grande cavée, Griffon Cove river, P. Q.
J. M. Clarke, coll. 1900

Orthothetes becraftensis see **Schuchertella becraftensis**

Orthothetes (Schuchertella) becraftensis see **Schuchertella becraftensis**

Orthothetes chemungensis see **Schuchertella chemungensis**

Orthothetes (Schuchertella) deformis see **Schuchertella deformis**

Orthothetes (Schuchertella) woolworthanus mut. **gaspensis** see **Schuchertella woolworthana** mut. **gaspensis**

OXLOSIA Ulrich & Cooper

Oxlosia accola (Clarke)

8396 HYPOTYPE *Eunoa accola* Ruedemann. G. S. A., Mem. 2. 1934. p. 82, pl. 19, fig. 8.

Deepkill sh. Deep kill, N. Y.
R. Ruedemann, coll. 1901

PARMORTHIS Schuchert & Cooper

Parmorthis cf. elegantula (Dalman)

8397 HYPOTYPE *Dalmanella* cf. *elegantula* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 41, pl. 4, fig. 9.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

PATERULA Barrande

Paterula minuta Ruedemann

8398 HOLOTYPE *Paterula minuta* Ruedemann. G. S. A., Mem. 2. 1934. p. 79, pl. 17, fig. 7.
Deepkill sh. Deep kill, near Melrose, N. Y.
R. Ruedemann, coll. 1901

PETROCRANIA Raymond

Petrocrania (?) grandegrevensis (Clarke)

8399 HOLOTYPE: HOLOPLASTOTYPE *Craniella (?) grandegrevensis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 212, pl. 47, fig. 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

PHILHEDRA Koken

Philhedra laelia (Hall)

8400 HYPOTYPE *Crania laelia* Hall. N. Y. S. M., Ann. Rep't 24. 1872. p. 220 (advance sheets, 1866).
Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 114, pl. 11, fig. 5.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8401 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 6.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8402 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 7.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8403 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 8.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8404 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 9.
Whetstone Gulf formation Near Rome, N. Y.
R. Ruedemann, coll.

8405 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 10.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8406 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 11.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8407 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 12.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.
On slab with type of *Philhedra laelia,* pl. 11, fig. 13.

8408 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 13.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.
On slab with type of *Philhedra laelia,* pl. 11, fig. 12.

8409 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 11, fig. 14.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Pholidops cf. **ovata** see **Craniops** cf. **ovata**

Plaesiomys cf. **porcata** see **Dinorthis (Plaesiomys)** cf. **porcata**

Plaesiomys retrorsa see **Dinorthis (Retrorsirostra) retrorsa**

Platyorthis Schuchert & Cooper

Platyorthis cf. **circularis** (Sowerby)

8411 HYPOTYPE: HYPOPLASTOTYPE *Orthis circularis* Sowerby. Geol. Soc. London, Tr., 2d ser. 1842. 6: 409.
Dalmanella cf. *circularis* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 88, pl. 21, fig. 5.
Moose River ss.
Jackman farm, town of Jackman, Somerset co. Me.
O. O. Nylander, coll. 1905

8412 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 6.
Moose River ss.
Jackman farm, town of Jackman, Somerset co. Me.
O. O. Nylander, coll. 1905

8413 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 7.
Moose River ss.
Jackman farm, town of Jackman, Somerset co. Me.
O. O. Nylander, coll. 1905

Platyorthis lucia (Billings)

8414 HYPOTYPE *Orthis lucia* Billings. Can. G. S., Paleo. Foss. 1874. v. 1, pt 2, p. 35.
Dalmanella lucia Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 204, pl. 44, fig. 12, 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8415 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 44, fig. 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8416 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 44, fig. 15, 16, 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8417 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 44, fig. 19, 20.
Oriskany (Glenerie) ls. Glenerie, N. Y.
Gilbert Van Ingen, coll. 1903

PLECTAMBONITES Pander

Plectambonites centricarinatus Ruedemann

8418 HOLOTYPE *Plectambonites centricarinatus* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 92, pl. 4, fig. 7.
Indian Ladder beds Indian Ladder, Albany co. N. Y.
R. Ruedemann, coll.

Plectambonites rugosus see **Sowerbyella rugosa**

Plectambonites sericeus see **Sowerbyella sericea**

Plectambonites sericeus var. **jugata** see **Sowerbyella sericea** var. **jugata**

Plectorthis sp. cf. **whitfieldi** see **Austinella** sp. cf. **whitfieldi**

PLETHORHYNCHA Hall & Clarke

Plethorhyncha barrandi (Hall)

8419 HYPOTYPE *Plethorhyncha barrandii* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 171, pl. 28, fig. 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Plethorhyncha pleiopleura (Conrad)

8420 HYPOTYPE *Atrypa pleiopleura* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 5. 1841. p. 55.
Plethorhyncha pliopleura Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 171, pl. 28, fig. 11, 12, 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8421 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 28, fig. 14.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll.

8422 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 28, fig. 15.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll.

PLEUROTHYRIS Cloud

Pleurothyris stewarti (Clarke)

8423 HOLOTYPE *Rensselaeria stewarti* Clarke. N. Y. S. M. Bul. 107. 1907. p. 239; fig. p. 240.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 38, pl. 7, fig. 13.
Dalhousie beds — Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8424 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 240.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 7, fig. 14.
Dalhousie beds — Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8425 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 240.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 7, fig. 19.
Dalhousie beds — Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8426 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 7, fig. 17, 18.
Dalhousie beds — Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8427 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 7, fig. 20.
Dalhousie beds — Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pleurothyris cf. stewarti (Clarke)

8428 HYPOTYPE *Rensselaeria* cf. *stewarti* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 79, pl. 18, fig. 1.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8429 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 2.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8430 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 3.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

PRIONOTHYRIS Cloud

Prionothyris diobolaris (Clarke)

8431 COTYPE *Megalanteris diobolaris* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 142, pl. 34, fig. 1.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8432 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 2.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8433 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 3.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8434 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 4.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8435 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 5.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Eodevonaria arcuata,* pl. 34, fig. 24, 30; *Chonetes highlandensis,* pl. 34, fig. 32.

Prionothyris cf. ovalis (Hall)

8436 HYPOTYPE *Megalanteris* cf. *ovalis* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 81, pl. 18, fig. 14.
Moose River ss. Telos lake dam, Me.
O. O. Nylander, coll.

8437 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 15, 16.
Moose River ss. Telos lake dam, Me.
O. O. Nylander, coll.

Prionothyris perovalis Cloud

8438 HYPOTYPE *Megalanteris ovalis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 167, pl. 27, fig. 1, 2, 3.
Prionothyris perovalis Cloud. G. S. A., Spec. P. no. 38. 1942. p. 67.
Oriskany (Glenerie) ls. Glenerie, N. Y.
Gilbert Van Ingen, coll.

8439 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 27, fig. 4.
Oriskany (Glenerie) ls. Glenerie, N. Y.
Gilbert Van Ingen, coll.

8440 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 27, fig. 5.
Oriskany (Glenerie) ls. Glenerie, N. Y.
Gilbert Van Ingen, coll.

8441 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 27, fig. 6.
Oriskany (Glenerie) ls. Glenerie, N. Y.
Gilbert Van Ingen, coll.

PRODUCTELLA Hall

Productella sp.

8442 MORPHOTYPE *Productella* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (G).
Hinsdale beds
About 1 mile southeast of Whitesville, N. Y.
J. G. Woodruff, coll. & don. 1934

Productella bialveata Hall

8443 HYPOTYPE *Productella bialveata* Caster. Bul. Amer. Pal. 1930. v. 15, no. 58, p. 27, pl. 20, fig. 3.
Chemung beds Meadville, Pa.
C. Van Deloo, coll. 1863

On slab with types of *Productella bialveata,* Pal. N. Y., v. 4, pl. 26, fig. 24-28.

Productella cf. **lachrymosa** (Conrad)

8444 MORPHOTYPE *Productella* cf. *lachrymosa* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (G).
Machias beds South of Friendship, N. Y.
J. G. Woodruff, coll. & don. 1934

8445 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (D).
Wellsville beds
2½ miles north of Elm Valley, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

Productella lachrymosa (Conrad) var. **lima** Hall

8446 HYPOTYPE *Productella lachrymosa* var. *lima* Caster. Bul. Amer. Pal. 1930. v. 15, no. 58, p. 25, pl. 19, fig. 20.
Chemung beds Cattaraugus co. N. Y.
C. Van Deloo, coll. 1863

On slab with type of *Productella lachrymosa* var. *lima,* Pal. N. Y., v. 4, pl. 25, fig. 32.

PRODUCTUS Sowerby

Productus auriculispinus Beede

8447 HOLOTYPE (original & counterpart) *Productus auriculispinus* Beede. N. Y. S. M. Bul. 149. 1911. p. 166; figures p. 166.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

Counterpart on slab with type of *Liopteria acadica,* fig. p. 170.

Productus dawsoni Beede

8448 HOLOTYPE *Productus dawsoni* Beede. N. Y. S. M. Bul. 149. 1911. p. 162; fig. p. 162.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Dielasma sacculus,* fig. p. 167; *Aviculopecten lyelli,* low right fig. p. 172; *Productus dawsoni* var. *acadicus,* fig. p. 162.

Productus dawsoni Beede var. **acadicus** Beede

8449 HOLOTYPE *Productus dawsoni* var. *acadicus* Beede. N. Y. S. M. Bul. 149. 1911. p. 162; fig. p. 162.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Aviculopecten lyelli,* low. right fig. p. 172; *Dielasma sacculus,* fig. p. 167; *Productus dawsoni,* fig. p. 162.

Productus doubleti Beede

8450 HOLOTYPE *Productus doubleti* Beede. N. Y. S. M. Bul. 149. 1911. p. 165; figures p. 165.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

Productus prouti Beede

8451 HOLOTYPE *Productus prouti* Beede. N. Y. S. M. Bul. 149. 1911. p. 163; figures p. 163.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

Productus tenuicostiformis Beede

8452 COTYPE *Productus tenuicostiformis* Beede. N. Y. S. M. Bul. 149. 1911. p. 163; low. left fig. p. 164.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

8453 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. low. mid. fig. p. 164.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Productus tenuicostiformis,* low. right fig., up. left fig., up. mid. fig., up. right fig., p. 164; *Spirorbis* sp., p. 161; *Orbiculoidea* cf. *limata,* p. 161.

8454 COTYPE: COPLASTOTYPE Beede. N. Y. S. M. Bul. 149. 1911. low. right fig. p. 164.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Productus tenuicostiformis,* low. mid. fig., up. left fig., up. mid. fig., up. right fig., p. 164; *Spirorbis* sp., p. 161; *Orbiculoidea* cf. *limata,* p. 161.

8455 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. up. left fig. p. 164.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.
On slab with types of *Productus tenuicostiformis,* low. mid. fig., low. right fig., up. mid. fig., up. right fig., p. 164; *Spirorbis* sp., p. 161; *Orbiculoidea* cf. *limata,* p. 161.

8456 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. up. mid. fig. p. 164.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.
On slab with types of *Productus tenuicostiformis,* low. mid. fig., low. right fig., up. left fig., up. right fig., p. 164; *Spirorbis* sp., p. 161; *Orbiculoidea* cf. *limata,* p. 161.

8457 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. up. right fig. p. 164.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.
On slab with types of *Productus tenuicostiformis,* low. mid. fig., low. right fig., up. left fig., up. mid. fig., p. 164; *Spirorbis* sp., p. 161; *Orbiculoidea* cf. *limata,* p. 161.

PRORENSSELAERIA Raymond

Prorensselaeria nylanderi Raymond

8458 HYPOTYPE *Rensselaeria* sp. nov. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 115, pl. 29, fig. 19.
Prorensselaeria nylanderi Raymond. Boston Soc. Nat. Hist., Pr. 1923. v. 36, no. 7, p. 467.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

PROTOLEPTOSTROPHIA Caster

Protoleptostrophia blainvilli (Billings)

8459 HYPOTYPE *Strophomena blainvillei* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 28.
Leptostrophia blainvillii Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 237, pl. 36, fig. 19.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8460 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 20.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8461 HYPOTYPE:HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 21.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8462 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 22.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

8463 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 23.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll. 1904

8464 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 36, fig. 24.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll. 1904

PUGNAX Hall & Clarke

Pugnax magdalena Beede

8465 HOLOTYPE *Pugnax magdalena* Beede. N. Y. S. M. Bul. 149. 1911. p. 166; figures p. 166.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

PUGNOIDES Weller

Pugnoides cf. duplicatus (Hall)

8466 MORPHOTYPE *Camarotoechia* cf. *duplicata* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12 (A).
Germania beds
1½ miles northeast of Round Top, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

RAFINESQUINA Hall & Clarke

Rafinesquina alternata (Emmons) mut. **centristriata** Ruedemann

8467 COTYPE *Rafinesquina alternata* mut. *centristriata* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 127, pl. 12, fig. 13.
Pulaski sh. Below railroad bridge at Pulaski, N. Y.
R. Ruedemann, coll.

8468 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 14.
Whetstone Gulf sh.
Station 6 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

On slab with types of *Hyolithes pumilus,* pl. 10, fig. 6; *Jonesella pedigera,* pl. 23, fig. 13, 14, 15.

Rafinesquina mucronata Foerste

8469 HYPOTYPE *Rafinesquina mucronata* Foerste. Denison Univ., Sci. Lab., Bul. 1914. 17: 265.

Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 129, pl. 12, fig. 16.
Glacial (Pulaski) drift Near Trenton Falls, N. Y.
Rust purchase

8470 HYPOTYPE Ruedemann.. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 17.
Glacial (Pulaski) drift Near Trenton Falls, N. Y.
Rust purchase

Rafinesquina ulrichi (James)

8471 HYPOTYPE *Strophomena (?) ulrichi* James. Paleontologist. 1878. 1: 6.

Rafinesquina ulrichi Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 128, pl. 12, fig. 15.
Whetstone Gulf formation
Station 9 of the Wood creek section, N. Y.
R. Ruedemann, coll.

RENSSELAERIA Hall

Rensselaeria sp. ?

8472 HYPOTYPE *Rensselaeria* sp.? Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 166, pl. 26, fig. 6.
Grande Grève ls. Grande Grève, P. Q.

8473 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 26, fig. 7.
Grande Grève ls. Grande Grève, P. Q.

Rensselaeria sp. nov. see Prorensselaeria nylanderi

Rensselaeria atlantica see Mendathyris mainensis

Rensselaeria callida see Globithyris callida

Rensselaeria cf. crassicosta see Rhenorensselaeria cf. crassicosta

Rensselaeria diania see Globithyris diania

Rensselaeria elongata (Conrad)

8474 HYPOTYPE *Atrypa elongata* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 3. 1839. p. 65.

Rensselaeria ovoides Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 79, pl. 17, fig. 10.

Moose River ss.

Cunningham's camp, Matagamon lake, Me.

O. O. Nylander, coll. 1905

8475 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 17, fig. 11.

Moose River ss.

Cunningham's camp, Matagamon lake, Me.

O. O. Nylander, coll. 1905

8476 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 17, fig. 12.

Moose River ss.

Cunningham's camp, Matagamon lake, Me.

O. O. Nylander, coll. 1905

Rensselaeria falklandica Clarke

8477 COTYPE: COPLASTOTYPE *Rensselaeria falklandica* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 267, pl. 17, fig. 29.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 21, fig. 14.

Devonian Port Howard, East Falkland

Thore Halle, don.

8478 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 17, fig. 30.

Devonian Port Howard, East Falkland

Thore Halle, don.

8479 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 17, fig. 31.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 21, fig. 15.
Devonian Port Howard, East Falkland
Thore Halle, don.

Rensselaeria mainensis see **Mendathyris mainensis**

Rensselaeria ovoides see **Rensselaeria elongata**

Rensselaeria ovoides var. **gaspensis** see **Etymothyris gaspensis**

Rensselaeria (Amphigenia) parva see **Amphigenia parva**

Rensselaeria stewarti see **Pleurothyris stewarti**

Rensselaeria cf. **stewarti** see **Pleurothyris** cf. **stewarti**

RESSERELLA Bancroft

Resserella multisecta (Meek)

8165 HYPOTYPE: HYPOPLASTOTYPE *Orthis emacerata* var. *multisecta* Meek. Ohio Geol. Surv., Pal. 1. 1873. p. 112.
Dalmanella multisecta Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 117, pl. 12, fig. 1.
Whetstone Gulf sh.
Station 12 of Wood creek section, near Rome. N. Y
R. Ruedemann, coll.

8166 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 2.
Whetstone Gulf sh.
Station 10 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

8167 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 3.
Whetstone Gulf sh.
Station 14 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

RETICULARIA McCoy

"Reticularia" cf. bicostata (Vanuxem)

8480 HYPOTYPE *Spirifer* cf. *bicostatus* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 44, pl. 4, fig. 21.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Retzia jamesiana see **Derbyina jamesiana**

RHENORENSSELAERIA Kegel

Rhenorensselaeria cf. **crassicosta** (Koch)

8481 HYPOTYPE *Rensselaeria crassicosta* Koch. Neues Jahr. Min., Geol. u. Pal. 1881. 2. Anmerkung. p. 387.
Rensselaeria cf. *crassicosta* Clarke. N. Y. S. M. Bul. 107. 1907. p. 243; fig. p. 243.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 80, pl. 17, fig. 7.
Moose River ss.
First dam on Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

8482 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. figures p. 243.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 17, fig. 8, 9.
Moose River ss.
First dam on Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

RHIPIDOMELLA Oehlert

Rhipidomella hybridoides Clarke

8483 HOLOTYPE *Rhipidomella hybridoides* Clarke. N. Y. S. M. Bul. 107. 1907. p. 282; figures p. 283.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 47, pl. 10, fig. 20, 21, 22.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

8484 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 10, fig. 19, 28.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

8485 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 10, fig. 24, 25, 26.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

8486 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 10, fig. 27.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

Rhipidomella lehuquetiana Clarke

8487 COTYPE *Rhipidomella lehuquetiana* Clarke. N. Y. S. M. Bul. 107. 1907. p. 281; figures p. 282.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 202, pl. 43, fig. 10, 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8488 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 282.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8489 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8490 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Rhipidomella logani Clarke

8491 COPLASTOTYPE *Rhipidomella logani* Clarke. N. Y. S. M. Bul. 107. 1907. p. 280; fig. p. 281.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 202, pl. 43, fig. 15.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8492 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 281.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke. coll. 1900

8493 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 281.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 18.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

8494 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43. fig. 21.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Rhipidomella musculosa (Hall)

8495 HYPOTYPE *Orthis musculosa* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 46 (description only).
Rhipidomella musculosa Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 201, pl. 42, fig. 1.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8496 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 42, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8497 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 42, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8498 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 42, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8499 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8500 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8501 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 20.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8502 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 43, fig. 22.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Rhipidomella musculosa (Hall) var. solaris Clarke

8503 COTYPE: COPLASTOTYPE *Rhipidomella musculosa* var. *solaris* Clarke. N. Y. S. M. Bul. 107. 1907. p. 284; fig. p. 284.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 88, pl. 21, fig. 9.
Moose River ss. Jackman farm, town of Jackman, Me.
O. O. Nylander, coll.

8504 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 284.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 10.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.

8505 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 284.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 11.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8506 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 21, fig. 8.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll.

Rhipidomella numus Clarke

8507 HYPOTYPE *Rhipidomella numus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 283.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 47, pl. 11, fig. 1, 2.
Dalhousie beds Dalhousie, N. B.

8508 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 11, fig. 3, 6.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

8509 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 11, fig. 4.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

Rhynchonella allegania see **Camarotoechia allegania**

Rhynchonella dryope see **Camarotoechia dryope**

Rhynchospira globosa see **Rhynchospirina globosa**

RHYNCHOSPIRINA Schuchert & LeVene

Rhynchospirina globosa (Hall)

8510 HYPOTYPE *Waldheimia globosa* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 87 (description only).

Rhynchospira globosa Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 109, pl. 29, fig. 14, 15.

St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll.

8511 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 29, fig. 16, 17.

St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll.

SCHIZAMBON Walcott

Schizambon albaniensis Ruedemann

8512 HOLOTYPE *Schizambon albaniensis* Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 105; p. 105, fig. 59.

Snake Hill beds Watervliet, near Albany, N. Y.
R. Ruedemann, coll.

SCHIZOBOLUS Ulrich

Schizobolus truncatus (Hall)

8513 HYPOTYPE *Discina truncata* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 16. 1863. p. 28 (description only).

Schizobolus truncatus Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 325, pl. 25, fig. 3.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 30, fig. 2.

Devonian: Ereré group Ereré, Pará, Brazil
Morgan expedition collection
O. A. Derby & J. M. Clarke, donors, 1906

8514 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 25, fig. 4.

Clarke. N. Y. S. M. Bul. 164. 1913. pl. 30, fig. 3.

Devonian: Ereré group Ereré, Pará, Brazil
Morgan expedition collection
O. A. Derby & J. M. Clarke, donors, 1906

SCHIZOPHORIA King

Schizophoria ? amii Clarke

8515 HOLOTYPE *Schizophoria ? amii* Clarke. N. Y. S. M. Bul. 107. 1907. p. 284; figures p. 284.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 204, pl. 44, fig. 22, 23, 24.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8516 HYPOTYPE: HYPOPLASTOTYPE (original & counterpart) Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 44, fig. 21, 25.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

SCHIZOTRETA Kutorga

Schizotreta conica (Dwight)

8517 COTYPE *Orbiculoidea conica* Dwight. Amer. Jour. Sci., 3d ser. 1880. 19: 452, pl. 21, fig. 1, 1a.
Trenton ls. Three miles north of Newburgh, N. Y.
W. B. Dwight, coll. 1879

8518 COTYPE Dwight. Amer. Jour. Sci., 3d ser. 1880. v. 19, pl. 21, fig. 2.
Trenton ls. Three miles north of Newburgh, N. Y.
W. B. Dwight, coll. 1879

8519 COTYPE Dwight. Amer. Jour. Sci., 3d ser. 1880. v. 19, pl. 21, fig. 5.
Trenton ls. Three miles north of Newburgh, N. Y.
W. B. Dwight, coll. 1879

8520 COTYPE Dwight. Amer. Jour. Sci., 3d ser. 1880. v. 19, pl. 21, fig. 6.
Trenton ls. Three miles north of Newburgh, N. Y.
W. B. Dwight, coll. 1879

8521 COTYPE Dwight. Amer. Jour. Sci., 3d ser. 1880. v. 19, pl. 21, fig. 8, 9.
Trenton ls. Three miles north of Newburgh, N. Y.
W. B. Dwight, coll. 1879

8522 COTYPE Dwight. Amer. Jour. Sci., 3d ser. 1880. v. 19, pl. 21, fig. 10.
Trenton ls. Three miles north of Newburgh, N. Y.
W. B. Dwight, coll. 1879

8523 COTYPE Dwight. Amer. Jour. Sci., 3d ser. 1880. v. 19, pl. 21, fig. 11, 11a.

Schizotreta conica Hall & Clarke. Pal. N. Y. 1892. v. 8, pt 1, pl. 4E, fig. 6.

Trenton ls. Three miles north of Newburgh, N. Y.
W. B. Dwight, coll. 1879

SCHUCHERTELLA Girty

Schuchertella sp.

8524 HYPOTYPE: HYPOPLASTOTYPE *Schuchertella* sp. Clarke. N. Y. S. M. Bul. 149. 1911. p. 130; left and center figures p. 130.
Devonian Migouasha, P. Q.

8525 HYPOTYPE Clarke. N. Y. S. M. Bul. 149. 1911. right fig. p. 130.
Devonian Migouasha, P. Q.

Schuchertella becraftensis (Clarke)

8527 HYPOTYPE *Orthothetes (Schuchertella) becraftensis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 199, 238, pl. 41, fig. 1.
Grande Grève ls. Grande Grève, P. Q.

8528 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
Charles Schuchert, coll.

Type in U. S. N. M.

8529 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8530 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8531 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 6, 7.
Grande Grève ls. Grande Grève, P. Q.

8532 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Schuchertella chemungensis (Conrad)

8533 MORPHOTYPE *Schuchertella chemungensis* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (A).
Machias beds South of Friendship, N. Y.
J. G. Woodruff, coll. & don. 1934

Schuchertella cf. chemungensis (Conrad)

8534 MORPHOTYPE *Schuchertella* cf. *chemungensis* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (I).
Machias beds South of Friendship, N. Y.
J. G. Woodruff, coll. & don. 1934

8535 MORPHOTYPE (original & counterpart) Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (I).
Wellsville beds
One mile east of Andover, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

Schuchertella deformis (Hall)

8536 HYPOTYPE: HYPOPLASTOTYPE *Orthis deformis* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 44 (description only).
Orthothetes (Schuchertella) deformis Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 124, pl. 31, fig. 1, 2.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8537 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 31, fig. 3.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

Schuchertella sulivani (Morris & Sharpe)

8538 HYPOTYPE: HYPOPLASTOTYPE *Orthis sulivani* Morris & Sharpe. Geol. Soc. London, Quart. Jour. 1846. 2: 275.
Schuchertella sulivani Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1: 279, pl. 23, fig. 17, 18.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 28, fig. 11.
Devonian — Fox bay, West Falkland
Thore Halle, don.

8539 HYPOTYPE: HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 23, fig. 19.
Devonian — Fox bay, West Falkland
Thore Halle, don.

8540 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 23, fig. 20.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 28, fig. 9.
Devonian — Fox bay, West Falkland
Thore Halle, don.

Schuchertella woolworthana (Hall) mut. **gaspensis** (Clarke)

8541 COPLASTOTYPE *Orthothetes (Schuchertella) woolworthanus* mut. *gaspensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 279 (description only).
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 199, pl. 41, fig. 9.
Grande Grève ls. — Grande Grève, P. Q.
J. M. Clarke, coll.
Type in U. S. N. M.

8542 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 10.
Grande Grève ls. — Grande Grève, P. Q.
J. M. Clarke, coll.
Type in U. S. N. M.

8543 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 11.
Grande Grève ls. — Grande Grève, P. Q.
J. M. Clarke, coll.

8544 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 12.
Grande Grève ls. — Grande Grève, P. Q.
J. M. Clarke, coll.

8545 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 41, fig. 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Seminula dawsoni see **Composita dawsoni**

SOWERBYELLA Jones

Sowerbyella rugosa (Meek)

8546 HYPOTYPE *Leptaena sericea* var. *rugosa* Meek. Ohio Geol. Surv., Pal. 1, pt 2. 1873. p. 72.
Plectambonites rugosus Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 123, pl. 12, fig. 19.
Whetstone Gulf formation
Station 15 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

8547 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 20.
Whetstone Gulf formation
Station 18 of Lorraine gulf section, N. Y.
On slab with types of *Climacograptus lorrainensis,* p. 61, fig. 50; pl. 7, fig. 12.

Sowerbyella sericea (Sowerby)

8548 HYPOTYPE *Leptaena sericea* Sowerby. Murchison's Sil. Syst. 1839.
Plectambonites sericeus Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 123, pl. 12, fig. 18.
Lorraine sh.
Station 6 of Quaker Hill brook section, N. Y.
R. Ruedemann, coll. 1915

Sowerbyella sericea (Sowerby) var. **jugata** (Ruedemann)

8549 COTYPE *Plectambonites sericeus* var. *jugata* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 92, pl. 4, fig. 3.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

8550 COTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 4, fig. 4.
Snake Hill beds Snake hill, N. Y.
R. Ruedemann, coll.

8551 COTYPE: COPLASTOTYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 4, fig. 5.
Snake Hill beds — Snake hill, N. Y.
R. Ruedemann, coll.

8552 COTYPE: COPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 4, fig. 6.
Snake Hill beds — Snake hill, N. Y.
R. Ruedemann, coll.

SPIRIFER Sowerby

"Spirifer" sp. ?

8553 HYPOTYPE *Spirifer* sp. ? Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 183, pl. 32, fig. 24.
Grande Grève ls. — Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8554 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 32, fig. 25.
Grande Grève ls. — Grande Grève, P. Q.
J. M. Clarke, coll. 1900

"Spirifer" sp. ?

8555 HYPOPLASTOTYPE *Spirifer* sp. ? Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 85, pl. 20, fig. 8.
Moose River ss. — Telos lake dam, Me.
O. O. Nylander, coll. 1905

8556 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 13.
Moose River ss. — Telos lake dam, Me.
O. O. Nylander, coll. 1905

8557 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 14.
Moose River ss. — Telos lake dam, Me.
O. O. Nylander, coll. 1905

Spirifer sp. ? see **Spirifer pirssonae**

Spirifer antarcticus see **Australospirifer antarcticus**

Spirifer arenosus see **Costispirifer arenosus**

"Spirifer" aroostookensis Clarke

8558 HOLOTYPE: HOLOPLASTOTYPE *Spirifer aroostookensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 258; figures p. 258.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 85, 143, pl. 30, fig. 5, 9.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1901

8559 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 5.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8560 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 6.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8561 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 7.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8562 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 8.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8563 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 9.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8564 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 10.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8565 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 11.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8566 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 12.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8567 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 13.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8568 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 14.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8569 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 34, fig. 15, 16.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Spirifer cf. **bicostatus** see **Reticularis** cf. **bicostata**

"Spirifer" clarkei Katzer

8570 HOLOTYPE *Spirifer clarkei* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46: 7.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 274, pl. 11, fig. 2 a, b.
Devonian: Maecurú group Rio Maecurú, Brazil

"Spirifer" coelhoanus Katzer

8571 HOLOTYPE: HOLOPLASTOTYPE *Spirifer coelhoanus* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46: 7.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 273, pl. 10, fig. 4a, b.
Devonian: Maecurú group Rio Maecurú, Brazil

"Spirifer" concinnus Hall

8572 HYPOTYPE *Spirifer concinnus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 39, pl. 8, fig. 4.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8573 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 8, fig. 5.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8574 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 8, fig. 8.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8575 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 8, fig. 9, 10.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll.

8576 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 8, fig. 14.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8577 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 8, fig. 16.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

"Spirifer" cf. **concinnus** Hall

8578 HYPOTYPE *Spirifer* cf. *concinnus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 85, pl. 20, fig. 1.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8579 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 2.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8580 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 3.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8581 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 4.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Spirifer crispus see **Howellela crispa**

Spirifer cyclopterus see **Acrospirifer cyclopterus**

"Spirifer" cymindis Clarke

8585 COTYPE *Spirifer cymindis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 255; fig. p. 256.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 117, pl. 30, fig. 6.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co, Me.
O. O. Nylander, coll.

8586 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 256.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 7.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

8587 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 256.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 8.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

8588 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 10.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

8589 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 11.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

"Spirifer" cymindis Clarke var. **sparsus** Clarke

8590 COTYPE *Spirifer cymindis* var. *sparsa* Clarke. N. Y. S. M. Bul. 107. 1907. p. 257; fig. p. 257.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 118, pl. 30, fig. 13.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8591 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 257.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 14.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

8592 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 12.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

"Spirifer" derbyi Rathbun

8593 HYPOTYPE *Spirifera derbyii* Rathbun. Boston. Soc. Nat. Hist., Pr. 1878. 20: 26.
Spirifer derbyi Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 274, pl. 11, fig. 3a, b.
Devonian: Maecurú group Rio Maecurú, Brazil

Spirifer disjunctus see **Cyrtospirifer disjunctus**

Spirifer eriensis see **Spirifer (Delthyris) eriensis**

"Spirifer" (Delthyris) eriensis Grabau

8594 HYPOTYPE *Spirifer (Delthyris) eriensis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 50, pl. 15, fig. 3.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

8595 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 15, fig. 4.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Spirifer fimbriatus see **Elytha fimbriata**

Spirifer gaspensis see **Acrospirifer gaspensis**

Spirifer hawkinsi see **Australospirifer hawkinsi**

Spirifer iheringi see **Australospirifer iheringi**

Spirifer katzeri (in error) see **Brachyspirifer pedroanus**

Spirifer lauro-sodreanus see **Australospirifer lauro-sodreanus**

"Spirifer" macropleuroides Clarke

8596 HOLOTYPE: HOLOPLASTOTYPE *Spirifer macropleuroides* Clarke. N. Y. S. M. Bul. 107. 1907. p. 259; figures p. 259.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 119, pl. 30, fig. 3, 4.

Chapman ss.

Edmunds hill, Chapman plantation, Aroostook co. Me.

O. O. Nylander, coll.

Spirifer mesacostalis see **Tylothyris mesacostalis**

"Spirifer" modestus Hall var. **nitidulus** Clarke

8597 COTYPE *Spirifer modestus* var. *nitidulus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 182, pl. 31, fig. 18, 19, 20.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll.

8598 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 21, 22, 23.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll.

8599 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 24.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll.

Spirifer murchisoni see **Acrospirifer murchisoni**

Spirifer pedroana see **Brachyspirifer pedroanus**

"Spirifer" perimele Clarke

8600 COTYPE *Spirifer perimele* Clarke. N. Y. S. M. Bul. 107. 1907. p. 253; fig. p. 254.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 84, pl. 18, fig. 19.

Moose River ss. Tomhegan point, Moosehead lake, Me.

O. O. Nylander, coll. 1905

8601 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 254.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 20.

Moose River ss. Tomhegan point, Moosehead lake, Me.

O. O. Nylander, coll. 1905

On slab with types of *Spirifer perimele,* pl. 18, fig. 21; *Acrospirifer primaevus* var. *atlanticus,* pl. 19, fig. 9.

8602 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 254.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 21.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905
On slab with types of *Spirifer perimele,* pl. 18, fig. 20; *Acrospirifer primaevus* var. *atlanticus,* pl. 19, fig. 9.

8603 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 18, fig. 17, 18.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Spirifer perlamellosa see **Delthyris perlamellosa**

"Spirifer" pirssonae Pirsson & Schuchert

8604 COTYPE *Spirifer* sp. ? Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 85, pl. 20, fig. 9.
Spirifer pirssonae Pirsson & Schuchert. Amer. Jour. Sci. 1914. v. 37, p. 223.
Moose River ss. Telos lake dam, Me.
O. O. Nylander, coll. 1905

8605 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 10.
Moose River ss. Telos lake dam, Me.
O. O. Nylander, coll. 1905

8606 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 11.
Moose River ss. Telos lake dam, Me.
O. O. Nylander, coll. 1905

8607 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 20, fig. 12.
Moose River ss. Telos lake dam, Me.
O. O. Nylander, coll. 1905

"Spirifer" plicatus (Weller)

8608 HYPOTYPE *Metaplasia plicata* Weller. N. J. Geol. Surv., Rep't Pal. v. 3; Paleo. Faunas. 1903. p. 356.
Spirifer plicatus Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 181, pl. 31, fig. 1,2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8609 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8610 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 4,9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8611 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8612 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 10,11,12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8613 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8614 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8615 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 15,16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8616 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 31, fig. 17.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

Spirifer primaevus var. **atlanticus** see **Acrospirifer primaevus** var. **atlanticus**

"Spirifer" subcuspidatus Schnur var. **lateincisus Scupin**

8617 HYPOTYPE *Spirifer subcuspidatus* var. *lateincisa* Scupin. Die Spiriferen Deutschlands. 1899. p. 19.

Spirifer subcuspidatus var. *lateincisus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 254.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 116, pl. 30, fig. 15.

Chapman ss.

Presque Isle stream, Chapman plantation, Aroostook co. Me.

O. O. Nylander, coll.

8618 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 255.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 16.

Chapman ss.

Presque Isle stream, Chapman plantation, Me.

O. O. Nylander, coll.

8619 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 17.

Chapman ss.

Presque Isle stream, Chapman plantation, Me.

O. O. Nylander, coll.

8620 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 255.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 18.

Chapman ss.

Presque Isle stream, Chapman plantation, Me.

O. O. Nylander, coll.

8621 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 255.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 30, fig. 19.

Chapman ss.

Presque Isle stream, Chapman plantation, Me.

O. O. Nylander, coll.

STEGERHYNCHUS Foerste

Stegerhynchus neglectum (Hall)

8622 HYPOTYPE *Camarotoechia (?) neglecta* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 45, pl. 4, fig. 28-30.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

8623 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 4, fig. 31.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

STROPHALOSIA King

Strophalosia nebraskensiformis Beede

8624 COTYPE *Strophalosia nebraskensiformis* Beede. N. Y. S. M. Bul. 149. 1911. p. 177; left fig. and up. left fig. p. 178.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

8625 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. up. mid. fig. p. 178.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

8626 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. right fig. p. 178.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

8627 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. up. right fig. p. 178.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

8628 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. low. mid. fig. p. 178.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

STROPHEODONTA Hall

Stropheodonta argentina see **Leptaena argentina**

Stropheodonta crebristriata (Conrad) protype **simplex** Clarke

8629 HOLOTYPE: HOLOPLASTOTYPE *Stropheodonta crebristriata* protype *simplex* Clarke. N. Y. S. M. Bul. 107. 1907. p. 272 (description only).
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 187, pl. 35, fig. 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Stropheodonta galatea (Billings)

8630 HYPOTYPE *Strophomena galatea* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 20.
Stropheodonta galatea Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 188, pl. 35, fig. 17, 18.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8631 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 19.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8632 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 20.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8633 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 21.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8634 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 22.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8635 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 23.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8636 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 24.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8637 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 26.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Stropheodonta hunti Clarke

8638 COTYPE *Stropheodonta hunti* Clarke. N. Y. S. M. Bul. 107. 1907. p. 268; fig. p. 268.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 185, pl. 34, fig. 4, 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8639 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 268.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8640 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8641 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8642 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.
On slab with type of *Stropheodonta hunti,* pl. 34, fig. 10.

8643 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.
On slab with type of *Stropheodonta hunti,* pl. 34, fig. 7.

8644 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Stropheodonta lincklaeni Hall

8645 HYPOTYPE *Strophodonta lincklaeni* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 55.
Stropheodonta lincklaeni Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 184, pl. 34, fig. 15.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8646 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8647 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Stropheodonta magniventer (Hall)

8648 HYPOTYPE *Strophomena (Strophodonta) magniventra* Hall. N. Y. S. Cab. Nat. Hist., Ann Rep't 10. 1857. p. 54 (description only).
Stropheodonta magniventer Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 184, pl. 34, fig. 22.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8649 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 23.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1903

Stropheodonta (Brachyprion) major see **Brachyprion major**

Stropheodonta parva Hall protype **avita** Clarke

8650 COPLASTOTYPE *Stropheodonta parva* protype *avita* Clarke. N. Y. S. M. Bul. 107. 1907. p. 273 (description only).
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 188, pl. 34, fig. 19.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8651 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 20.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8652 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 34, fig. 21.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Stropheodonta patersoni protype **bonamica** see **Cymostrophia patersoni** protype **bonamica**

Stropheodonta patersoni protype **praecedens** see **Cymostrophia patersoni** protype **praecedens**

Stropheodonta rosieri Clarke

8653 COTYPE *Stropheodonta rosieri* Clarke. N. Y. S. M. Bul. 107. 1907. p. 272; fig. p. 272.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 110, pl. 35, fig. 1.
St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll.

8654 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 272.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 35, fig. 2.
St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll.

Stropheodonta (Brachyprion) schuchertana see **Brachyprion schuchertanum**

Stropheodonta varistriata (Conrad)

8655 HYPOTYPE *Strophomena varistriata* Conrad. Phila. Acad. Nat. Sci., Jour. 1842. 8: 255.
Stropheodonta varistriata Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 43, pl. 8, fig. 22.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll. 1900

8656 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 8, fig. 23.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll. 1900

STROPHOMENA Blainville

Strophomena blainvillei see **Protoleptostrophia blainvillii**

Strophomena depressa var. **ventricosa** see **Leptaena rhomboidalis** var. **ventricosa**

Strophomena galatea see **Stropheodonta galatea**

"Strophomena" hoeferi Katzer

8657 COTYPE *Strophomena hoeferi Katzer. Kgl.* Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46: 6.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 270, pl. 11, fig. 5a, b.
Devonian: Maecurú gr. Rio Maecurú, Brazil

8658 COTYPE Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. pl. 11, fig. 5c, d.
Devonian: Maecurú gr. Rio Maecurú, Brazil

Strophomena irene see **Leptostrophia irene**

Strophomena (Strophodonta) leavenworthana see **Strophonella leavenworthana**

Strophomena (Strophodonta) magniventra see **Stropheodonta magniventer**

Strophomena cf. **planumbona** (Hall)

8659 HYPOTYPE *Leptaena planumbona* Hall. Pal. N. Y. 1847. 1:112.
Strophomena cf. *planumbona* Ruedemann. N. Y. S. M., Bul. 262. 1925. p. 129, pl. 12, fig. 21.
Pulaski beds Below railroad bridge at Pulaski, N. Y.
R. Ruedemann, coll.

Strophomena tullia see **Leptostrophia magnifica** var. **tullia**

Strophomena (?) ulrichi see **Rafinesquina ulrichi**

Strophomena varistriata see **Stropheodonta varistriata**

STROPHONELLA Hall

Strophonella ampla (Hall)

8660 HYPOTYPE *Strophonella ampla* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 197, pl. 37, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Strophonella (Amphistrophia) continens Clarke

8661 COTYPE *Strophonella (Amphistrophia) continens* Clarke. N. Y. S. M. Bul. 107. 1907. p. 275; fig. p. 276.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 195, pl. 40, fig. 3.
Grande Grève ls.
Shore of Gaspé basin, Grande Grève, P. Q.
J. M. Clarke, coll.

8662 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 276.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 5, 6.
Grande Grève ls. Gaspé bay, P. Q.
J. M. Clarke, coll.

8663 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8664 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 4.
Grande Grève ls.
Shore of Gaspé basin, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8665 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 7.
Grande Grève ls.
Cape rosier road near Bartlett's, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8666 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 8.
Grande Grève ls. Gaspé bay, P. Q.
J. M. Clarke, coll.

8667 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 9.
Grande Grève ls.
Shore of Gaspé bay, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8668 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 10.
Grande Grève ls.
Shore of Gaspé basin, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8669 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 40, fig. 11.
Grande Grève ls. Gaspé bay, P. Q.
J. M. Clarke, coll.

Strophonella (Amphistrophia) continens Clarke var. **equalis** Clarke

8670 COPLASTOTYPE *Strophonella (Amphistrophia) continens* var. *equalis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 277 (description only).
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 197, pl. 40, fig. 15.
Grande Grève ls. Gaspé bay, P. Q.
J. M. Clarke, coll.
Type in U. S. N. M.

Strophonella (Amphistrophia) continens Clarke var. **equiplicata** Clarke

8671 HOLOTYPE: HOLOPLASTOTYPE *Strophonella (Amphistrophia) continens* var. *equiplicata* Clarke. N. Y. S. M. Bul. 107. 1907. p. 276 (description only).
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 196, pl. 40, fig. 12, 13.
Grande Grève ls. Gaspé bay, P. Q.
J. M. Clarke, coll.

Strophonella (Amphistrophia) continens Clarke var. **senilis** Clarke

8672 HOLOTYPE *Strophonella (Amphistrophia) continens* var. *senilis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 277 (description only).
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 197, pl. 40, fig. 16.
Grande Grève ls.
Shore of Gaspé basin near Indian cove, P. Q.
J. M. Clarke, coll. 1900

Strophonella leavenworthana (Hall)

8673 HYPOTYPE *Strophomena (Strophodonta) leavenworthana* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 10. 1857. p. 53 (description only).
Strophonella leavenworthana Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 111, pl. 37, fig. 8.
St Alban beds Grande cavée, Griffon Cove river, P. Q.
J. M. Clarke, coll. 1900

Strophonella punctulifera (Conrad)

8674 HYPOTYPE *Strophonella punctulifera* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 111, pl. 37, fig. 11.
St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll.

8675 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 45, pl. 9, fig. 16.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

8676 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 9, fig. 17, 18.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll.

TREMATIS Sharpe

Trematis crassipuncta Ulrich

8677 HYPOTYPE *Trematis crassipuncta* Ulrich. Amer. Geol. 1889. 4: 22.
Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 112, pl. 11, fig. 24, 25.
Pulaski sh. Station 22a of Lorraine gulf section, N. Y.

Trematis millepunctata Hall

8678 HYPOTYPE *Trematis millepunctata* Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 111, pl. 11, fig. 22, 23.
Pulaski sh. Lorraine village, N. Y.
R. Ruedemann, coll.

Trematis punctostriata Hall var. **minor** Ruedemann

8679 COTYPE *Trematis punctostriata* var. *minor* Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 103; p. 103, fig. 53.
Snake Hill sh. Watervliet, near Albany, N. Y.
R. Ruedemann, coll.

8680 COTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 103, fig. 54.
Snake Hill sh. Watervliet, near Albany, N. Y.
R. Ruedemann, coll.

8681 COTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 103, fig. 55.
Snake Hill sh. Watervliet, near Albany, N. Y.
R. Ruedemann, coll.

8682 COTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 103, fig. 56.
Snake Hill sh. Watervliet, near Albany, N. Y.
R. Ruedemann, coll.

"Trematis" spinosa Ruedemann

8683 HOLOTYPE *Trematis spinosa* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 49, pl. 15, fig. 2.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

8684 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 50, fig. 32.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

Trematis terminalis (Emmons)

8685 HYPOTYPE *Orbicula terminalis* Emmons. Geol. N. Y., Rep't 2d Dist. 1842. p. 395.
Trematis terminalis Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 104; p. 103, fig. 57.
Snake Hill sh. Federal Signal works, Albany, N. Y.
R. Ruedemann, coll.

Triplecia nucleus see **Triplesia nucleus**

TRIPLESIA Hall

Triplesia nucleus (Hall)

8686 HYPOTYPE *Atrypa nucleus* Hall. Pal. N. Y. 1847. 1:138.
Triplecia nucleus Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 104; p. 105, fig. 58.
Snake Hill sh. Federal Signal works, Albany, N. Y.
R. Ruedemann, coll.

Tropidoleptus fascifer see **Brachyprion fascifer**

TYLOTHYRIS North

Tylothyris mesacostalis (Hall)

8687 MORPHOTYPE *Delthyris mesacostalis* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (M).
Cuba beds One mile northeast of Scio, N. Y.
J. G. Woodruff, coll. & don. 1934

8688 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (M).
Cuba beds One mile south of Alfred, N. Y.
J. G. Woodruff, coll. & don. 1934

8689 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (M).
Cuba beds Withey, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

8690 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (M).
Cuba beds One mile south of school 8,
Alfred twp, Wellsville quadrangle, N. Y.
J. G. Woodruff, coll. & don. 1934

8691 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (M).
Cuba beds 1/10 mile north of school 8,
Alfred twp, Wellsville quadrangle, N. Y.
J. G. Woodruff, coll. & don. 1934

8692 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (N).
Basal Cuba ss. Two miles east of Scio, N. Y.
J. G. Woodruff, coll. & don. 1934

UNCINULUS Bayle

Uncinulus mutabilis (Hall)

8693 HYPOTYPE *Uncinulus mutabilis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 171, pl. 28, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8694 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 28, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

8695 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 28, fig. 5.
Grande Grève ls. Grande Grève, P. Q.

8696 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 28, fig. 6.
Grande Grève ls. Grande Grève, P. Q.

8697 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 28, fig. 7.
Grande Grève ls. Grande Grève, P. Q.

8698 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 28, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

VELLAMO Öpik

Vellamo ruedemanni (Raymond)

8699 COTYPE (original & counterpart) *Clitambonites americanus* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 94, pl. 4, fig. 14.
Clitambonites ruedemanni Raymond. Can. G. S., Mus. Bul. 31. 1921. p. 27.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

8700 COTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 4, fig. 16-19.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Waldheimia globosa see **Rhynchospira globosa**

WHITFIELDELLA Hall & Clarke

Whitfieldella nitida (Hall)

8701 HYPOTYPE *Whitfieldella nitida* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 44, pl. 4, fig. 32, 36, 37.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

8702 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 4, fig. 33-35.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

ZYGOSPIRA Hall

Zygospira cincinnatiensis Meek

8703 HYPOTYPE: HYPOPLASTOTYPE *Zygospira cincinnatiensis* Meek. Ohio Geol. Surv., Pal. 1. 1873. p. 126.

Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 134, pl. 12, fig. 27.

Whetstone Gulf sh.

Station 9 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

Zygospira concentrica Ulrich

8704 HYPOTYPE *Zygospira concentrica* Ulrich. Cin. Soc. N. H., Jour. 1879. 2:14.

Ruedemann. N. Y. S. M. Bul. 262. 1925. p. 134, pl. 12, fig. 24.

Whetstone Gulf sh.

Station 12 of Mill creek section at Turin, N. Y.
R. Ruedemann, coll.

8705 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 25.

Whetstone Gulf sh.

Station 12 of Mill creek section at Turin, N. Y.
R. Ruedemann, coll.

8706 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 262. 1925. pl. 12, fig. 26.

Whetstone Gulf sh.

Station 12 of Mill creek section at Turin, N. Y.
R. Ruedemann, coll.

Zygospira modesta (Say)

8707 HYPOTYPE *Zygospira modesta* Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 20, fig. 6.

Whetstone Gulf sh.

Station 12 of Mill creek section at Turin, N. Y.
R. Ruedemann, coll.

On slab with types of ***Colpomya faba*** mut. ***intermedia,*** *Pterinea* sp. nov., *Triarthrus huguiensis;* all pl. 20, fig. 6.

PELECYPODA

ACTINOPTERIA Hall

Actinopteria sp.

8708 HYPOTYPE *Actinopteria* sp. Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 19, fig. 13.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll. 1904

Actinopteria sp.

8709 MORPHOTYPE *Actinopteria* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (L).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

Actinopteria communis (Hall)

8710 HYPOTYPE *Actinopteria communis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 155, pl. 19, fig. 8.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll. 1903

8711 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 19, fig. 9.
Grande Grève ls. Dolbel brook, Grande Grève, P. Q.
J. M. Clarke, coll. 1904

8712 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 19, fig. 10.
Grande Grève ls. Dolbel brook, Grande Grève, P. Q.
J. M. Clarke, coll. 1904

8713 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 19, fig. 12.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll. 1903

Actinopteria (Pterinea) fronsacia Clarke

8714 COPLASTOTYPE *Actinopteria (Pterinea) fronsacia* Clarke. N. Y. S. M. Bul. 107. 1907. p. 198; fig. p. 198.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 230, pl. 19, fig. 6.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

Actinopteria textilis (Hall)

8715 HYPOTYPE: HYPOPLASTOTYPE *Actinopteria textilis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 156, pl. 19, fig. 1.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1903

8716 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 19, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8717 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 19, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Actinopteria textilis (Hall) var. **arenaria** (Hall)

8718 HYPOTYPE: HYPOPLASTOTYPE *Pterinea textilis* var. *arenaria* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 18, fig. 7.
Oriskany ss. Schoharie, N. Y.

Allerisma sp. see **Allorisma** sp.

ALLODESMA Ulrich

Allodesma cf. **subellipticum** (Ulrich)

8721 HYPOTYPE *Modiolopsis subelliptica* Ulrich. Minn. Geol. and Nat. Hist. Surv., Ann. Rep't 19. 1892. p. 226.

Allodesma cf. *subellipticum* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 103, pl. 6, fig. 11.
Canajoharie sh. Canajoharie, Montgomery co. N. Y.
R. Ruedemann, coll.

ALLORISMA King

"Allorisma" sp.

8722 HYPOTYPE *Allerisma* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 7.
Moose River ss. Misery stream, town of Sandwich, Me.
O. O. Nylander, coll.

Ambonychia radiata see **Byssonychia radiata**

Anodontopsis ? unionoides see **Ischyrodonta unionoides**

Anodontopsis ventricosa see **Schizodus ventricosus**

Avicula demissa see **Pterinea (Caritodens) demissa**

Avicula insueta see **Pterinea insueta**

Avicula pseudolaevis see **Pterinea** cf. **pseudolaevis**

Avicula trentonensis see **Prolobella ? trentonensis**

AVICULOPECTEN McCoy

Aviculopecten sp.

8723 HYPOPLASTOTYPE *Aviculopecten* sp. Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 18, fig. 4.
Gaspé ss. Gaspé basin, Gaspé, Can.
J. M. Clarke, coll.

8724 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 18, fig. 5.
Gaspé ss. Gaspé basin, Gaspé, Can.
J. M. Clarke, coll.

8725 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 18, fig. 6.
Gaspé ss. Gaspé basin, Gaspé, Can.
J. M. Clarke, coll. 1900

Aviculopecten acadicus Hartt?

8726 HYPOTYPE *Aviculopecten acadicus* Hartt (in Dawson). Acadian Geol. 1868. p. 307.
Aviculopecten acadicus ? Beede. N. Y. S. M. Bul. 149. 1911. p. 172; fig. p. 173.
Mississippian
Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

Aviculopecten alcis Clarke

8727 HOLOTYPE *Aviculopecten alcis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 195; fig. p. 195.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 70, pl. 13, fig. 5.
Moose River ss.
Seven miles north of Kineo, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Aviculopecten cf. **alternatus** (Simpson)

8728 MORPHOTYPE *Lyriopecten alternatus* Simpson. Amer. Philos. Soc., Tr. 1890. n. s., v. 16, p. 446.
Aviculopecten cf. *alternatus* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (K).
Wellsville beds
About 1 mile north of Whitesville, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

Aviculopecten coelhoanus Katzer

8729 HOLOTYPE (original & counterpart) *Aviculopecten coelhoanus* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46: 8.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. pl. 12, fig. 8a, b, c, d.
Devonian: Maecurú group Rio Maecurú, Brazil

Aviculopecten flammiger Clarke

8730 COTYPE *Aviculopecten flammiger* Clarke. N. Y. S. M. Bul. 107. 1907. p. 196; fig. p. 196.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 71, pl. 13, fig. 1.
Moose River ss. Askwith siding, Askwith, Me.
O. O. Nylander, coll. 1905

8731 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 196.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 2, 3.
Moose River ss.
Misery stream, town of Sandwich, Me.
O. O. Nylander, coll. 1905

8732 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 4.
Moose River ss. Telos lake, Me.

Aviculopecten cf. **gebhardi** (Conrad)

8733 HYPOTYPE *Aviculopecten* cf. *gebhardi* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 70, pl. 14, fig. 8.
Moose River ss.
Cunningham's camp, near Matagamon lake, Me.
O. O. Nylander, coll. 1905

8734 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 14, fig. 9.
Moose River ss.
Cunningham's camp, near Matagamon lake, Me.
O. O. Nylander, coll. 1905

Aviculopecten jumeaui Clarke

8735 HOLOTYPE *Aviculopecten jumeaui* Clarke. N. Y. S. M. Bul. 107. 1907. p. 196; fig. p. 197.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 154, pl. 19, fig. 5.
Grande Grève ls. Percé rock, Percé, Can.
J. M. Clarke, coll. 1904

8736 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 19, fig. 4.
Grande Grève ls. Percé rock, Percé, Can.
J. M. Clarke, coll.

Aviculopecten lyelli Dawson

8737 HYPOTYPE *Aviculopecten lyelli* Dawson. Acadian Geol. 1868. p. 305.
Beede. N. Y. S. M. Bul. 149. 1911. p. 171; up. left fig. p. 172.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.
On slab with type of *Edmondia intermedia,* fig. p. 167.

8738 HYPOTYPE Beede. N. Y. S. M. Bul. 149. 1911. up. mid. fig. p. 172.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

8739 HYPOTYPE Beede. N. Y. S. M. Bul. 149. 1911. up. right fig. p. 172.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

8740 HYPOTYPE Beede. N. Y. S. M. Bul. 149. 1911. low. left fig. p. 172.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.
On slab with type of *Euomphalus exortivus,* p. 173.

8741 HYPOTYPE Beede. N. Y. S. M. Bul. 149. 1911. low. right fig. p. 172.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Dielasma sacculus,* fig. p. 167; *Productus dawsoni,* fig. p. 162; *Productus dawsoni* var. *acadicus,* fig. p. 162.

AVICULOPINNA Meek

"Aviculopinna" egena Beede

8742 HOLOTYPE *Aviculopinna egena* Beede. N. Y. S. M. Bul. 149. 1911. p. 182; fig. p. 182.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

On slab with type of *Schizodus denysi,* left fig. p. 182.

BYSSONYCHIA Ulrich

Byssonychia hyacinthensis Foerste

8743 HYPOTYPE *Byssonychia hyacinthensis* Foerste. Can. G. S., Mem. 138. 1924. p. 163.

Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 31, pl. 3, fig. 9.
Whetstone Gulf sh.
Station 8 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

Byssonychia radiata (Hall)

8744 HYPOTYPE *Ambonychia radiata* Hall. Pal. N. Y. 1847 1: 292.

Byssonychia radiata Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 27, pl. 3, fig. 1.
Pulaski drift Near Trenton, N. Y.
Rust purchase

8745 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 3, fig. 2.
Pulaski drift Near Trenton, N. Y.
Rust purchase

8746 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 3, fig. 3.
Pulaski drift
Near Trenton, N. Y.
Pickett collection

Byssonychia vera Ulrich

8747 HYPOTYPE *Byssonychia vera* Ulrich. Ohio Geol. Surv. 1893. 7: 629.

Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 29, pl. 3, fig. 4.
Whetstone Gulf sh.
Station 15 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

8748 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 3, fig. 5.
Whetstone Gulf sh.
Station 18 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

8749 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 3, fig. 6.
Whetstone Gulf sh.
Station 11 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

8750 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 3, fig. 7.
Whetstone Gulf sh.
Station 11 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

Byssonychia vera Ulrich var. **pluricosta** Ruedemann

8751 HOLOTYPE *Byssonychia vera* var. *pluricosta* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 30, pl. 3, fig. 8.
Whetstone Gulf sh.
Station 3 of Wood creek section, N. Y.
R. Ruedemann, coll.

CARDIOMORPHA de Koninck

Cardiomorpha (Goniophora?) simplex Clarke

8752 COTYPE *Cardiomorpha (Goniophora ?) simplex* Clarke. N. Y. S. M. Bul. 107. 1907. p. 229 (description only).
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 77, pl. 15, fig. 8.
Moose River ss. Moosehead lake, Me.
O. O. Nylander, coll. 1905

8753 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 15, fig. 9.
Moose River ss. Moosehead lake, Me.
O. O. Nylander, coll. 1905

8754 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 15, fig. 10.
Moose River ss. Moosehead lake, Me.
O. O. Nylander, coll. 1905

8755 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 15, fig. 11.
Moose River ss. Moosehead lake, Me.
O. O. Nylander, coll. 1905

CARYDIUM Beushausen

Carydium elongatum Clarke

8756 COTYPE *Carydium elongatum* Clarke. N. Y. S. M. Bul. 107. 1907. p. 227; fig. p. 227.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 33, pl. 5, fig. 17.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll. 1900

8757 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 5, fig. 16.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll. 1900

Carydium gregarium Beushausen

8758 HYPOPLASTOTYPE *Carydium gregarium* Beushausen. Kgl. Preuss. Geol. Landes., Abh. n.f. 1895. H. 17, p. 156.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 33, pl. 5, fig. 8.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8759 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 5, fig. 10.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8760 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 141, pl. 33, fig. 11,12.
Oriskany beds Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1900

8761 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 13.
Oriskany beds Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1900

On slab with type of *Nuculites (Ditichia) doto,* pl. 33, fig. 10.

CLIDOPHORUS Hall

Clidophorus sp.

8762 HYPOTYPE *Clidophorus* sp. Foerste. Denison. Univ., Sci. Lab., Bul. 1914. 17: 303, pl. 1, fig. 13.
Lorraine beds Rome, N. Y.
Rust purchase

Clidophorus foerstei Ruedemann

8763 HOLOTYPE *Clidophorus foerstei* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 99, pl. 5, fig. 15, 16.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Clidophorus scitulus (Emmons)

8764 HYPOTYPE: HYPOPLASTOTYPE *Nuculites scitula* Emmons. Geol. N. Y., Rep't 2d Dist. 1842. p. 399.

Clidophorus scitulus Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 19, pl. 6, fig. 14.
Whetstone Gulf sh.
Station 17 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

8765 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 6, fig. 15.
Whetstone Gulf sh.
Station 9 of Wood creek section, N. Y.
R. Ruedemann, coll.

8766 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 6, fig. 16.
Whetstone Gulf sh.
Station 8 of Wood creek section, N. Y.
R. Ruedemann, coll.

8767 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 6, fig. 17.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

8768 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 6, fig. 18.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

Clidophorus ventricosus Ruedemann

8769 HOLOTYPE *Clidophorus ventricosus* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 99, pl. 5, fig. 11, 12.
Snake Hill sh. Snake Hill, Saratoga co. N. Y.
R. Ruedemann, coll.

8770 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 5, fig. 13.
Snake Hill beds Snake Hill, Saratoga co. N. Y.
R. Ruedemann, coll.

8771 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 5, fig. 14.
Snake Hill beds Snake Hill, Saratoga co. N. Y.
R. Ruedemann, coll.

COLPOMYA Ulrich

Colpomya faba (Emmons) mut. **intermedia** Ruedemann

8772 HOLOTYPE *Colpomya faba* mut. *intermedia* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 41, pl. 5, fig. 9.
Whetstone Gulf formation
Station 17 of Lorraine gulf section, N. Y.

8773 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 20, fig. 6.
Whetstone Gulf formation
Station 12 of Mill creek section, N. Y.
R. Ruedemann, coll.

On slab with types of *Zygospira modesta, Pterinea* sp. nov., *Triarthrus huguiensis;* all pl. 20, fig. 6.

CONOCARDIUM Bronn

Conocardium sp.

8774 HYPOTYPE *Conocardium* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 50, pl. 5, fig. 7.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

Conocardium cuneus (Conrad)

8775 HYPOTYPE *Conocardium cuneus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 162, pl. 23, fig. 8.
Grande Grève ls. Grande Grève, Can.
J. M. Clarke, coll. 1900

Conocardium incarceratum Clarke

8776 HOLOTYPE *Conocardium incarceratum* Clarke. N. Y. S. M. Bul. 107. 1907. p. 235; figures p. 236.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 37, pl. 5, fig. 1,2.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Conocardium cf. inceptum Hall

8777 HYPOTYPE: HYPOPLASTOTYPE *Conocardium* cf. *inceptum* Clarke. Erroneously inserted in N. Y. S. M., Mem. 9, pt 1. 1908. pl. 23, fig. 9.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8778 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 112, pl. 28, fig. 19.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

CORNELLITES Williams

Cornellites cf. **fasciculatus** (Goldfuss)

9042 HYPOTYPE *Pterinea fasciculata* Goldfuss. Petrefacta Germaniae. 1840. 2: 137.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 102, pl. 25, fig. 1.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander. coll. 1905

9043 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 2.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9044 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 3.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9045 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 4.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9046 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 5.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9047 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 6.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9048 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 7.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Cornellites fasciculatus (Goldfuss) var. **occidentalis** (Clarke)

9049 COPLASTOTYPE *Pterinea fasciculatus* var. *occidentalis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 205; fig. p. 204.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 27, pl. 4, fig. 6.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9050 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 4, fig. 3.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9051 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 4, fig. 7.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

CTENODONTA Salter

Ctenodonta declivis Ruedemann

8779 HOLOTYPE *Ctenodonta declivis* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 101, pl. 6, fig. 2, 3.
Snake Hill beds Snake hill, Saratoga co., N. Y.
R. Ruedemann, coll.

Ctenodonta filistriata Ulrich

8780 HYPOTYPE *Ctenodonta filistriata* Ulrich. Geol. Minn. 1897. v. 3, pt 2, p. 599.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 14, pl. 1, fig. 13.
Whetstone Gulf sh.
Station 1 of Wood creek section, near Rome, N. Y.
R. Ruedemann, coll.

8781 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 1, fig. 14.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

Ctenodonta levata (Hall)

8782 HYPOTYPE *Ctenodonta levata* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 100, pl. 6, fig. 1.
Snake Hill beds Snake hill, Saratoga co., N. Y.
R. Ruedemann, coll.

Ctenodonta pectunculoides (Hall)

8783 HYPOTYPE *Tellinomya pectunculoides* Hall. N. Y. S. M., Ann. Rep't 24. 1872. p. 228 (advance sheets, 1871. p. 4).
Ctenodonta pectunculoides Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 11, pl. 1, fig. 8.
Whetstone Gulf sh.
Station 9 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

8784 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 1, fig. 9.
Whetstone Gulf sh.
Station 9 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

8785 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 1, fig. 10.
Whetstone Gulf sh.
Stations 10 to 11 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

8786 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 1, fig. 11.
Pulaski sh. Worthville, N. Y.
R. Ruedemann, coll.

8787 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 1, fig. 12.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

Ctenodonta prosseri Ruedemann

8788 HOLOTYPE *Ctenodonta prosseri* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 101, pl. 6, fig. 4, 5.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Ctenodonta radiata Ruedemann

8789 HOLOTYPE *Ctenodonta radiata* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 102, pl. 6, fig. 6.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Ctenodonta recta Ruedemann

8790 HOLOTYPE *Ctenodonta recta* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 102, pl. 6, fig. 7, 8.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Ctenodonta ruedemanni H. N. Eaton

8791 HOLOTYPE *Ctenodonta ruedemanni* H. N. Eaton. N. Y. S. M. Bul. 253. 1924. p. 112, pl. 1, fig. 4.
Vernon sh.
Two miles east of Jordan, Onondaga co. N. Y.
H. N. Eaton, coll. 1922

Ctenodonta ? salinensis Ruedemann

8792 COTYPE *Ctenodonta ? salinensis* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 75, pl. 25, fig. 8.
Camillus sh.
Bull's quarry, town of Lenox, Madison co. N. Y.

8793 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 25, fig. 9.
Camillus sh.
Bull's quarry, town of Lenox, Madison co. N. Y.

Ctenodonta subcuneata Ruedemann

8794 HOLOTYPE *Ctenodonta subcuneata* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 103, pl. 6, fig. 9, 10.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Cucullella elliptica see **Ditichia** cf. **elliptica**

CUNEAMYA Hall & Whitfield

Cuneamya acutifrons Ulrich

8795 HYPOTYPE *Cuneamya acutifrons* Ulrich (in Ruedemann). N. Y. S. M. Bul. 162. 1912. p. 106, pl. 6, fig. 15, 16.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Cuneamya elliptica Miller

8796 HYPOTYPE *Cuneamya elliptica* Miller. Cin. Soc. N. H., Jour. 1881. 4: 317.

Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 8, pl. 1, fig. 5.

Pulaski sh. Worthville, N. Y.
R. Ruedemann, coll.

Cuneamya aff. **neglecta** (Meek)

8797 HYPOTYPE *Modiolopsis anodontoides* Hall. Pal. N. Y. 1847. v. 1, pl. 82, fig. 3c.

Sedgwickia (Grammysia?) neglecta Meek. Phila. Acad. Nat. Sci., Pr. 1872. p. 325.

Cuneamya aff. *neglecta* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 7, pl. 1, fig. 3.

Whetstone Gulf sh. Rodman, Jefferson co. N. Y.

8798 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul 272. 1926. pl. 1, fig. 4.

Pulaski sh. Worthville, N. Y.

Cuneamya scapha Hall & Whitfield cf. mut. **brevior** Foerste

8799 HYPOTYPE *Cuneamya scapha* mut. *brevior* Foerste. Denison Univ., Sci. Lab., Bul. 1914. 17: 307.

Cuneamya scapha cf. mut. *brevior* Ruedemann. N. Y. S. M., Bul. 272. 1926. p. 9, pl. 1, fig. 7.

Pulaski sh. Lorraine, N. Y.
R. Ruedemann, coll.

CYMATONOTA Ulrich

Cymatonota parallela (Hall)

8800 HYPOTYPE *Orthonota parallela* Hall. Pal. N. Y. 1847. 1: 299.

Cymatonota parallella Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 46, pl. 6, fig. 1.

Pulaski ss. Drift near Trenton, N. Y.
R. Ruedemann, coll.

8801 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 6, fig. 2.

Pulaski ss. Martinsburg, N. Y.
F. B. Hough, coll.

Cymatonota parallela (Hall) mut. **intermedia** Ruedemann

8802 COTYPE: COPLASTOTYPE *Cymatonota parallela* mut. *intermedia* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 48, pl. 6, fig. 3.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8803 COTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 6, fig. 4.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

8804 COTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 6, fig. 5.
Whetstone Gulf sh.
Station 8 of Wood creek section, N. Y.
R. Ruedemann, coll.

CYPRICARDELLA Hall

Cypricardella sp.

8805 HYPOTYPE *Cypricardella* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 111, pl. 28, fig. 5.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

Cypricardella norumbegae Clarke

8806 HYPOPLASTOTYPE *Cypricardella norumbegae* Clarke. N. Y. S. M. Bul. 107. 1907. p. 227.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 34, pl. 6, fig. 3.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8807 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 6, fig. 4.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Cypricardella parmula Clarke

8808 COTYPE *Cypricardella parmula* Clarke. N. Y. S. M. Bul. 107. 1907. p. 228; fig. p. 228.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 77, pl. 16, fig. 9.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Cypricardella parmula,* pl. 16, fig. 10, 11, 12.

8809 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 228.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 10.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Cypricardella parmula,* pl. 16, fig. 9, 11, 12.

8810 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 228.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 11.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with types of *Cypricardella parmula,* pl. 16, fig. 9, 10, 12.

8811 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 228.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 12.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.

On slab with types of *Cypricardella parmula,* pl. 16, fig. 9, 10, 11.

CYPRICARDINIA Hall

Cypricardinia cf. crenistriata see **Cypricardinia magna**

Cypricardinia distincta Billings

8812 HYPOTYPE: HYPOPLASTOTYPE *Cypricardinia distincta* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 56.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 157, pl. 24, fig. 12.
Grande Grève ls.
Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

8813 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 13.
Grande Grève ls. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

8814 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8815 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 15.
Grande Grève ls.
Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

8816 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 17.
Grande Grève ls.
Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll. 1904

8817 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 18.
Grande Grève ls.
Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

8818 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 19.
Grande Grève ls.
Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll.

Cypricardinia magna Clarke
or
Cypricardinia cf. crenistriata Sandberger

8819 COTYPE: COPLASTOTYPE *Cypricardinia magna* Clarke or cf. *crenistriata* Sandberger. Clarke. N. Y. S. M. Bul. 107. 1907. p. 229; fig. p. 229.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 76, pl. 15, fig. 12.

Moose River ss.

Baker Brook point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8820 COTYPE:COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 229.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 15, fig. 13.

Moose River ss.

Baker Brook point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Cypricardites ovata see **Modiolopsis ovata**

CYRTODONTA Billings

"Cyrtodonta" or **Modiomorpha**

8821 HYPOTYPE *Cyrtodonta* or *Modiomorpha* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 27, fig. 9.

Chapman ss.

Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

"Cyrtodonta" beyrichi Beushausen

8822 HYPOTYPE *Cyrtodonta beyrichi* Beushausen. Geol. Specialkarte Preuss. u. Thüring. Staaten, Abh. 1884. Bd 6, h. 1, p. 70.

Clarke. N. Y. S. M. Bul. 107. 1907. p. 214; fig. p. 215.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 73, pl. 15, fig. 4.

Moose River ss.

Seven miles north of Kineo, Moosehead lake. Me.
O. O. Nylander, coll. 1905

8823 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. figures p. 215.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 15, fig. 5, 6.
Moose River ss.
Seven miles north of Kineo, Moosehead lake, Me.
O. O. Nylander, coll. 1905

"Cyrtodonta" gratia Clarke

8824 COTYPE: COPLASTOTYPE *Cyrtodonta gratia* Clarke. N. Y. S. M. Bul. 149. 1911. p. 129; fig. p. 129.
Devonian Migouasha, P. Q.

8825 COTYPE Clarke. N. Y. S. M. Bul. 149. 1911. fig. p. 129.
Devonian Migouasha, P. Q.

"Cyrtodonta" muscula Clarke

8826 COTYPE *Cyrtodonta muscula* Clarke. N. Y. S. M. Bul. 107. 1907. p. 215; fig. p. 215.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 74, pl. 15, fig. 1.
Moose River ss.
Seven miles north of Kineo, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8827 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. figures p. 215.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 15, fig. 2, 3.
Moose River ss.
Seven miles north of Kineo, Moosehead lake, Me.
O. O. Nylander, coll. 1905

DITICHIA Sandberger

Ditichia cf. elliptica (Maurer)

8828 HYPOTYPE *Cucullella elliptica* Maurer. Fauna d. Rechtsrheinischen Unterdevon. 1886. p. 15.
Ditichia cf. *elliptica* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 78, pl. 16, fig. 7.
Moose River ss.
Matagamon lake, Me., on east side, one mile above dam.
O. O. Nylander, coll. 1905

8829 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 8.
Moose River ss.
Matagamon lake, Me., on east side, one mile above dam.
O. O. Nylander, coll. 1905

EDMONDIA de Koninck

Edmondia ? sp.

8830 HYPOTYPE *Edmondia ?* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 6, fig. 9, 10.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Edmondia intermedia Beede

8831 HOLOTYPE *Edmondia intermedia* Beede. N. Y. S. M. Bul. 149. 1911. p. 167; fig. p. 167.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

On slab with type of *Aviculopecten lyelli,* up. left fig. p. 172.

Edmondia magdalena Beede

8832 HOLOTYPE *Edmondia magdalena* Beede. N. Y. S. M. Bul. 149. 1911. p. 168; fig. p. 168.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

GONIOPHORA Phillips

Goniophora sp.

8834 MORPHOTYPE *Goniophora* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 5 (K).
Machias beds
Half mile southwest of Belmont, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

Goniophora cercurus Clarke

8835 COTYPE *Goniophora cercurus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 141, pl. 33, fig. 18.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8836 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 19.
Oriskany ss. (possibly Schoharie beds)
Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908
On slab with type of *Eodevonaria arcuata,* pl. 34, fig. 23.

8837 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 20.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8838 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 21.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8839 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 22.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Goniophora mediocris Billings

8840 HYPOTYPE *Goniophora mediocris* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 50.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 161, pl. 22, fig. 6, 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

GRAMMYSIA de Verneuil

Grammysia sp.

8841 HYPOTYPE *Grammysia* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 5, fig. 23.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Grammysia canadensis Billings

8842 HYPOTYPE *Grammysia canadensis* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 51.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 231, pl. 23, fig. 13.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1904

Grammysia cf. elliptica Hall

8843 MORPHOTYPE *Grammysia* cf. *elliptica* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12 (G).
Germania beds 1½ miles northeast of Round Top, Wellsville quadrangle, N. Y.
J. G. Woodruff, coll. & don, 1934

Grammysia modiomorphae Clarke

8844 COTYPE *Grammysia modiomorphae* Clarke. N. Y. S. M. Bul. 107. 1907. p. 221; figures p. 222.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 108, pl. 27, fig. 3, 4, 5.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8845 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 222.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 27, fig. 8.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

8846 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 27, fig. 1.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

8847 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 27, fig. 2.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

8848 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 27, fig. 6.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

ISCHYRODONTA Ulrich

Ischyrodonta unionoides (Meek)

8849 HYPOTYPE *Anodontopsis ? unionoides* Meek. Amer. Jour. Sci. 1871. 2: 299.
Ischyrodonta unionoides Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 19, pl. 2, fig. 1.
Pulaski drift Near Trenton, N. Y.
Rust purchase
On slab with type of *Ischyrodonta unionoides,* pl. 2, fig. 2.

8850 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 2, fig. 2.
Pulaski drift Near Trenton, N. Y.
Rust purchase
On slab with type of *Ischyrodonta unionoides,* pl. 2, fig. 1.

8851 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 2, fig. 3.
Pulaski drift Near Trenton, N. Y.
Rust purchase

Leda brevirostris see **Nuculana brevirostris**

LEIOPTERIA Hall

Leiopteria ?

8866 HYPOTYPE *Liopteria ?* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 23, fig. 16.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

Leiopteria acadica Beede

8867 HOLOTYPE *Liopteria acadica* Beede. N. Y. S. M. Bul. 149. 1911. p. 170; fig. p. 170.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.
On slab with counterpart of *Productus auriculispinus,* figures p. 166.

Leiopteria dawsoni Beede

8868 COTYPE *Liopteria dawsoni* Beede. N. Y. S. M. Bul. 149. 1911. p. 169; left fig. p. 170.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

8869 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. right fig. p. 170.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

Leiopteria linguiformis Hall

8870 HOLOTYPE *Leiopteria linguiformis* Hall. Pal. N. Y. 1884. v. 5, pt 1, no. 1, p. 173, pl. 88, fig. 29.
Chemung group North of Binghamton, N. Y.

LEPTODESMA Hall

Leptodesma sp.

8855 MORPHOTYPE *Leptodesma* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (F).
Wellsville beds
One mile east of Andover, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

Leptodesma sp.

8856 MORPHOTYPE *Leptodesma* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12 (H).
Germania beds 1½ miles northeast of Round Top,
Wellsville quadrangle, N. Y.
J. G. Woodruff, coll. & don. 1934

Leptodesma borealis Beede

8857 HOLOTYPE *Leptodesma borealis* Beede. N. Y. S. M. Bul. 149. 1911. p. 169; fig. p. 169.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

Leptodesma cf. **potens** Hall

8858 MORPHOTYPE *Leptodesma* cf. *potens* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 9 (E).
Wellsville beds
2½ miles north of Elm Valley, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

On slab with type of *Crania* sp., fig. 9 (C).

LEPTODOMUS McCoy

Leptodomus communis Clarke

8859 COTYPE *Leptodomus communis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 224; fig. p. 224.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 108, pl. 28, fig. 10.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8860 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 8.
Chapman ss. Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

Leptodomus corrugatus Clarke

8861 HOLOTYPE: HOLOPLASTOTYPE *Leptodomus corrugatus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 224; fig. p. 224.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 109, pl. 28, fig. 6.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me
O. O. Nylander, coll.

Leptodomus prunus Clarke

8862 HOLOTYPE *Leptodomus prunus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 225; fig. p. 225.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 76, pl. 16, fig. 6.
Moose River ss. Blind Cove point, Telos lake, Me.
O. O. Nylander, coll. 1905

LIMOPTERA Hall

Limoptera rosieri Clarke

8864 HOLOTYPE: HOLOPLASTOTYPE *Limoptera rosieri* Clarke. N. Y. S. M. Bul. 107. 1907. p. 200; fig. p. 200.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 106, pl. 20, fig. 1.
St Alban beds Cape Rosier cove, Gaspé, P. Q.
J. M. Clarke, coll.

8865 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 20, fig. 2.
St Alban beds Cape Rosier cove, Gaspé, P. Q.
J. M. Clarke, coll. 1900

Liopteria ? see Leiopteria ?

Liopteria acadica see Leiopteria acadica

Liopteria dawsoni see Leiopteria dawsoni

Liopteria linguiformis see Leiopteria linguiformis

LUNULICARDIUM Münster

Lunulicardium ? sp.

8871 HYPOTYPE *Lunulicardium ?* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 141, pl. 33, fig. 23.
Oriskany ss. Pine Hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Lyriopecten alternatus see Aviculopecten cf. alternatus

LYRODESMA Conrad

Lyrodesma cincinnatiense Hall

8872 HYPOTYPE *Lyrodesma cincinnatiensis* Hall. N. Y. S. M., Ann. Rep't 24. 1872. p. 227 (advance sheets, 1871. p. 4).
Lyrodesma cincinnatiense Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 57, pl. 7, fig. 14, 15.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Lyrodesma conradi Ulrich

8873 HYPOTYPE: HYPOPLASTOTYPE *Lyrodesma conradi* Ulrich. Ohio Geol. Surv. 1893. 7: 684.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 55, pl. 7, fig. 1.
Whetstone Gulf sh.
Station 9 of Wood creek section, N. Y.
R. Ruedemann, coll.

8874 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 7, fig. 2.
Whetstone Gulf sh.
Station 8 of Wood creek section, N. Y.
R. Ruedemann, coll.

8875 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 7, fig. 3.
Whetstone Gulf sh.
Station 4 of Wood creek section, N. Y.
R. Ruedemann, coll.

8876 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 7, fig. 4.
Whetstone Gulf sh.
Station 8 of Wood creek section, N. Y.
R. Ruedemann, coll.

Lyrodesma cf. planum Conrad

8877 HYPOTYPE *Lyrodesma plana* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 5. 1841. p. 51.
Lyrodesma cf. *planum* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 54, pl. 7, fig. 5, 5a.
Pulaski beds Station 25 of Lorraine gulf section, N. Y
R. Ruedemann, coll.

Lyrodesma poststriatum (Emmons)

8878 HYPOTYPE: HYPOPLASTOTYPE *Nuculites post-striatus* Emmons. Geol. N. Y., Rep't 2d Dist. 1842. p. 399.
Lyrodesma poststriatum Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 56, pl. 7, fig. 6.
Pulaski ss. Pulaski, N. Y.
R. Ruedemann, coll.
On slab with type of *Lyrodesma poststriatum,* pl. 7, fig. 7.

8879 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 7, fig. 7.
Pulaski ss. Pulaski, N. Y.
R. Ruedemann, coll.
On slab with type of *Lyrodesma poststriatum,* pl. 7, fig. 6.

8880 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 7, fig. 8.
Pulaski ss. Drift near Trenton, N. Y.
Rust purchase
On slab with type of *Lyrodesma poststriatum,* pl. 7, fig. 9.

8881 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 7, fig. 9.
Pulaski ss. Drift near Trenton, N. Y.
Rust purchase
On slab with type of *Lyrodesma poststriatum,* pl. 7, fig. 8.

8882 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 7, fig. 10.
Pulaski ss. Drift near Trenton, N. Y.
Rust purchase

Lyrodesma schucherti Ruedemann

8883 HOLOTYPE *Lyrodesma schucherti* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 103, pl. 6, fig. 12.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Macrodon ? desuetus see **Parallelodon ? desuetus**
Macrodon hardingi see **Parallelodon hardingi ?**
Macrodus ? desuetus see **Parallelodon ? desuetus**

MEGAMBONIA Hall

Megambonia crenistriata Clarke

8887 HYPOTYPE *Megambonia crenistriata* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 157, pl. 21, fig. 6.
Grande Grève ls. Dolbel brook, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Megambonia denysia Clarke

8888 HOLOTYPE *Megambonia denysia* Clarke. N. Y. S. M. Bul. 107. 1907. p. 216; figures p. 216.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 157, pl. 21, fig. 8, 9.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

MODIELLA Hall

Modiella modiola Clarke

8889 HOLOTYPE *Modiella modiola* Clarke. N. Y. S. M. Bul. 107. 1907. p. 221; fig. p. 221.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 232, pl. 23, fig. 5.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

8890 HYPOTYPE (original & counterpart) Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 23, fig. 1.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll. 1904
On slab with types of *Modiella modiola,* pl. 23, fig. 3,4.

8891 HYPOTYPE (original & counterpart) Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 23, fig. 3.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1904
On slab with types of *Modiella modiola,* pl. 23, fig. 1,4.

8892 HYPOTYPE (original & counterpart) Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 23, fig. 4.
Gaspé ss. Gaspé basin, Gaspé, P. Q
J. M. Clarke, coll. 1904
On slab with types of *Modiella modiola,* pl. 23, fig. 1,3.

Modiella pygmaea (Conrad)

8893 HYPOPLASTOTYPE *Modiella pygmaea* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 231, pl. 23, fig. 6.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

8894 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 23, fig. 7.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

MODIODESMA Ulrich

Modiodesma modiolare (Conrad)

8895 HYPOTYPE *Pterinea modiolaris* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 2. 1838. p. 118.
Modiodesma modiolare Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 32, pl. 4.
Pulaski ss. Oswego co. N. Y.
Rust purchase
On slab with type of *Modiolopsis ovata,* pl. 4.

MODIOLA Lamarck

Modiola pooli Dawson ?

8896 HYPOTYPE *Modiola pooli* Dawson. Acadian Geol. 1868. p. 301.
Modiola pooli ? Beede. N. Y. S. M. Bul. 149. 1911. p. 173; fig. p. 173.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

Modiola praecedens see **Mytilops** cf. **praecedens**

MODIOLOPSIS Hall

Modiolopsis sp.

8897 HYPOTYPE *Modiolopsis* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 5, fig. 1.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

8898 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 5, fig. 2.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

8899 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 5, fig. 3.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

8900 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 5, fig. 5.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

Modiolopsis anodontoides see **Cuneamya** aff. **neglecta**

Modiolopsis modiolaris see **Modiodesma modiolare**

Modiolopsis ovata (Conrad)

8901 HYPOTYPE *Cypricardites ovata* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 5. 1841. p. 52.
Modiolopsis ovata Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 34, pl. 4.
Pulaski ss. Oswego co. N. Y.
Rust purchase
On slab with type of *Modiodesma modiolare,* pl. 4.

Modiolopsis subelliptica see **Allodesma** cf. **subellipticum**

Modiolopsis varia see **Modiomorpha varia**

MODIOMORPHA Hall

Modiomorpha see **Cyrtodonta**

Modiomorpha sp.

8902 HYPOTYPE *Modiomorpha* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 107, pl. 27, fig. 10.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

Modiomorpha impar Clarke

8903 COTYPE: COPLASTOTYPE *Modiomorpha impar* Clarke. N. Y. S. M. Bul. 107. 1907. p. 217; fig. p. 218.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 31, pl. 6, fig. 6.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Modiomorpha odiata Clarke

8904 COTYPE *Modiomorpha odiata* Clarke. N. Y. S. M. Bul. 107. 1907. p. 218; fig. p. 218.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 74, pl. 15, fig. 15.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8905 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 218.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 5.
Moose River ss. South side of dam, Matagamon lake, Me.
O. O. Nylander, coll. 1905

8906 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 15, fig. 14.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8907 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 1.
Moose River ss.
East side of Matagamon lake, Me., one mile above dam.
O. O. Nylander, coll. 1905
On slab with type of *Modiomorpha odiata,* pl. 16, fig. 2.

8908 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 2.
Moose River ss.
East side of Matagamon lake, Me., one mile above dam.
O. O. Nylander, coll. 1905
On slab with type of *Modiomorpha odiata,* pl. 16, fig. 1.

8909 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 3.
Moose River ss.
East side of Matagamon lake, Me., one mile above dam.
O. O. Nylander, coll. 1905

8910 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 4.
Moose River ss.
East side of Matagamon lake, Me., one mile above dam.
O. O. Nylander, coll. 1905

Modiomorpha protea Clarke

8911 COTYPE *Modiomorpha protea* Clarke. N. Y. S. M. Bul. 107. 1907. p. 220; fig. p. 220.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 107, pl. 26, fig. 6,8.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8912 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 220.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 26, fig. 7.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

8913 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 26, fig. 4.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8914 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 26, fig. 5.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8915 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 27, fig. 7.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

Modiomorpha varia (Billings)

8916 HYPOTYPE: HYPOPLASTOTYPE *Modiolopsis varia* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 56.
Modiomorpha varia Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 160, pl. 22, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8917 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 22, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Modiomorpha vulcanalis Clarke

8918 COTYPE *Modiomorpha vulcanalis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 219; fig. p. 219.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 106, pl. 26, fig. 9.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8919 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 219.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 26, fig. 10.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8920 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 26, fig. 11.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

MYALINA de Koninck

Myalina pterinaeoides Clarke

8921 HOLOTYPE *Myalina pterinaeoides* Clarke. N. Y. S. M. Bul. 107. 1907. p. 213; figures p. 214.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 106, pl. 25, fig. 16,17.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8922 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 12.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8923 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 13, 14.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8924 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 15.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8925 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 18.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8926 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 26, fig. 1.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8927 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 26, fig. 2.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8928 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 26, fig. 3.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

MYTILARCA Hall

Mytilarca sp.

8929 MORPHOTYPE *Mytilarca* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (A).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

8930 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (B).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

Mytilarca dalhousie Clarke

8931 HOLOTYPE *Mytilarca dalhousie* Clarke. N. Y. S. M. Bul. 107. 1907. p. 216; figures p. 217.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 30, pl. 5, fig. 18, 19, 20.

Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

8932 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 5, fig. 21.

Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Mytilarca eduliformis see Streptomytilus eduliformis

Mytilarca nitida Billings

8933 HYPOTYPE *Mytilarca nitida* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 53.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 159, pl. 23, fig. 15.

Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

MYTILOPS Hall

Mytilops (?) sp.

8934 MORPHOTYPE *Mytilops (?)* sp. Woodruff. N. Y. S. M., Bul. 326. 1942. fig. 19 (D).

Cattaraugus ss. Two miles southwest of Sawyer, N. Y.
J. G. Woodruff, coll. & don. 1934

Mytilops sp.

8935 MORPHOTYPE *Mytilops* sp. Woodruff. N. Y. S. M., Bul. 326. 1942. fig. 19 (B).

Wolf Creek beds Three miles north of Ceres, N. Y.
J. G. Woodruff, coll. & don. 1934

Mytilops cf. praecedens (Hall)

8936 MORPHOTYPE (original & counterpart) *Modiola praecedens* Hall. Preliminary Notice of Lamellibranchiate Shells, pt 2. 1869. p. 1.

Mytilops cf. *praecedens* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 19 (A).

Wolf Creek cgl.
Upper part of Wolf creek, Olean quadrangle, N. Y.
J. G. Woodruff, coll. & don. 1934

NUCULA Lamarck

Nucula iowensis White & Whitfield var. **magdalenensis** Beede

8937 HOLOTYPE *Nucula iowensis* var. *magdalenensis* Beede. N. Y. S. M. Bul. 149. 1911. p. 180; figures p. 180.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

8938 PARATYPE (of description) Beede. N. Y. S. M. Bul. 149. 1911. p. 180.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

8939 PARATYPE (of description) Beede. N. Y. S. M. Bul. 149. 1911. p. 180.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

Nucula cf. **krachtae** A. Roemer

8940 HYPOTYPE *Nucula krachtae* A. Roemer. Verstein. des Harzgebirges. 1843. p. 23.
Nucula cf. *krachtae* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 111, pl. 28, fig. 17.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8941 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 18.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

NUCULANA Link

Nuculana brevirostris (Hall)

8852 HYPOPLASTOTYPE *Leda brevirostris* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 234, pl. 24, fig. 1.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

8853 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 2.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

8854 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 3.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

NUCULITES Conrad

Nuculites appressa see **Schizodus appressus**

Nuculites (Ditichia) doto Clarke

8942 COTYPE *Nuculites (Ditichia) doto* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 140, pl. 33, fig. 5.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8943 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 7.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908
On slab with type of *Parallelodon ? desuetus,* pl. 33, fig. 16.

8944 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 8, 9.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908
On slab with type of *Nuculites fraxinus,* pl. 33, fig. 1.

8945 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 10.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908
On slab with type of *Carydium gregarium,* pl. 33, fig. 13.

Nuculites cf. **ellipticus** see **Nuculites** cf. **oblongatus**

Nuculites fraxinus Clarke

8946 COTYPE *Nuculites fraxinus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 141, pl. 33, fig. 1.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908
On slab with type of *Nuculites (Ditichia) doto,* pl. 33, fig. 8, 9.

8947 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 2.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8948 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 3.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8949 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 4.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with type of *Tropidodiscus rotalinea,* pl. 32, fig. 24, 25, 26.

Nuculites maxima see **Palaeoneilo maxima**

Nuculites cf. **oblongatus** Conrad
and
Nuculites cf. **ellipticus** Maurer

8950 HYPOTYPE *Nuculites* cf. *oblongatus* and cf. *ellipticus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 111, pl. 28, fig. 11.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

Nuculites post-striatus see **Lyrodesma poststriatum**

Nuculites reedi Clarke

8951 COTYPE *Nuculites reedi* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:183, pl. 10, fig. 15, 16.

Nuculites sharpei Clarke. N. Y. S. M. Bul. 164. 1913. pl. 13, fig. 11, 12.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

Nuculites scitula see **Clidophorus scitulus**
Nuculites sharpei see **Nuculites reedi**

Nuculites triqueter Conrad

8952 HYPOTYPE *Nuculites triquetrus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 233, pl. 24, fig. 8.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

8953 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 9.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

8954 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 24, fig. 10.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

Nuculites triquetrus see **Nuculites triqueter**

OLEANELLA Caster

Oleanella cf. **expansa** (Hall)

8955 MORPHOTYPE *Oleanella* cf. *expansa* Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12(E).
Germania beds 1½ miles northeast of Round Top, Wellsville quadrangle, N. Y.
J. G. Woodruff, coll. & don. 1934

ORTHODESMA Hall & Whitfield

"Orthodesma" ? sp.

8956 HYPOTYPE *Orthodesma ?* sp. H. N. Eaton. N. Y. S. M. Bul. 253. 1924. p. 114, pl. 1, fig. 5.
Vernon sh. Two miles east of Jordan, Onondaga co. N. Y.
H. N. Eaton, coll. 1922

Orthodesma nasutum see **Whiteavesia nasuta**

Orthodesma pulaskiense Foerste

8957 HYPOTYPE *Orthodesma pulaskiensis* Foerste. Denison Univ., Sci. Lab., Bul. 1914. 17: 288.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 38, pl. 5, fig. 2.
Pulaski ss. Drift near Trenton, N. Y.
Rust purchase

Orthodesma ? subcarinatum Ruedemann

8958 COTYPE *Orthodesma ? subcarinatum* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 96, pl. 5, fig. 5.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

8959 COTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 5, fig. 6, 8.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

8960 COTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 5, fig. 7.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Orthodesma subovale see **Psiloconcha subovalis**

Orthonota parallela see **Cymatonota parallela**

PALAEONEILO Hall

Palaeoneilo sp. ?

8968 HYPOTYPE *Palaeoneilo circulus* Clarke. N. Y. S. M. Bul. 107. 1907. Up. right fig. p. 231.
Palaeoneilo sp ? Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 111, pl. 28, fig. 15.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8969 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 16.
Chapman ss.
Presque Isle stream, Chapman plantation, Me
O. O. Nylander, coll.

Palaeoneilo circulus Clarke

8970 COTYPE *Palaeoneilo circulus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 231; fig. p. 231.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 110, pl. 28, fig. 12.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8971 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 231.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 14.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8972 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 13.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

Palaeoneilo circulus see **Palaeoneilo** sp. ?

Palaeoneilo cf. **constricta** (Conrad)

8973 HYPOTYPE: HYPOPLASTOTYPE *Palaeoneilo* cf. *constricta* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 233, pl. 24, fig. 6.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

Palaeoneilo (Nuculites) folles Clarke

8974 COTYPE *Palaeoneilo (Nuculites) folles* Clarke. N. Y. S. M. Bul. 107. 1907. p. 232; fig. p. 232.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 36, pl. 7, fig. 2.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Palaeoneilo mainensis Clarke

8975 COTYPE *Palaeoneilo mainensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 230; fig. p. 230.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 110, pl. 28, fig. 25.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8976 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 230.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 29.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8977 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 24, 26.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8978 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 27.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8979 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 28.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8980 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 30.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Palaeoneilo maxima (Conrad)

8981 HYPOTYPE: HYPOPLASTOTYPE (original & counterpart) *Nuculites maxima* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 5. 1841. p. 50.
Palaeoneilo maxima Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 233, pl. 24, fig. 4, 5.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1904

Palaeoneilo orbignyi Clarke

8982 HYPOTYPE *Palaeoneilo orbignyi* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 109, pl. 28, fig. 20.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

8983 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 21.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8984 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 22.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

8985 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 23.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

PALAEOPINNA Hall

Palaeopinna flabellum Hall

8986 HYPOTYPE *Palaeopinna flabellum* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 159, 233, pl. 21, fig. 1.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

8987 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 21, fig. 2.
St Albans beds Cape Rosier cove, Gaspé, P. Q.
Charles Schuchert, coll.
Type in U.S.N.M.

8988 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 21, fig. 4.
Grande Grève ls. Little Gaspé, P. Q.
Type in U.S.N.M.

8989 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 74, pl. 17, fig. 5, 6.
Moose River ss.
Seven miles north of Kineo, Moosehead lake, Me.
O. O. Nylander, coll. 1905

PALAEOSOLEN Hall

Palaeosolen simplex (Maurer)

8990 HYPOTYPE *Solen simplex* Maurer. Fauna d. Rechtsrheinischen Unterdevon. 1886. p. 18.
Palaeosolen simplex Clarke. N. Y. S. M. Bul. 107. 1907. p. 235; fig. p. 235.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 77, pl. 17, fig. 3.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

8991 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 17, fig. 4.
Moose River ss.
Near Soccatean point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Palaeosolen cf. simplex (Maurer)

8992 HYPOTYPE *Palaeosolen simplex* Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 235.
Palaeosolen cf. *simplex* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 111, pl. 28, fig. 1.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

8993 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 235.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 2.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

8994 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 28, fig. 3, 4.
Chapman ss.
Presque Isle stream, Chapman plantation, Me
O. O. Nylander, coll.

PARACYCLAS Hall

Paracyclas sp.

8995 MORPHOTYPE *Paracyclas* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12 (B).
Whitesville beds 1½ miles northwest of Andover, N. Y.
J. G. Woodruff, coll. and don. 1934

Parallelidon hardingi ? see **Parallelodon hardingi ?**

PARALLELODON Meek & Worthen

Parallelodon ? desuetus (Clarke)

8884 COTYPE *Macrodus ? desuetus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 141, pl. 33, fig. 15.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

8885 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 16.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908
On slab with type of *Nuculites (Ditichia) doto,* pl. 33, fig. 7.

8886 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 33, fig. 17.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Parallelodon hardingi (Dawson) ?

8996 ONOMATYPE *Macrodon hardingi* Dawson. Acadian Geol. 1868. p. 302.
Parallelidon hardingi ? Beede. N. Y. S. M. Bul. 149. 1911. p. 168.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

PECTUNCULUS Lamarck

"Pectunculus" ?? plutonicus Clarke

8997 HOLOTYPE *(Pectunculus ??) plutonicus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 35, pl. 6, fig. 11, 12.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

PHOLADOMORPHA Foerste

Pholadomorpha nasuta Ulrich

8998 HOLOTYPE *Pholadomorpha nasuta* (Ulrich ms.) Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 45, pl. 5, fig. 7.
Up. Pulaski ss. Station 28 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

8999 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 5, fig. 8.
Up. Pulaski ss. Station 28 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

PHTHONIA Hall

Phthonia cylindrica Hall

9000 HYPOTYPE *Phthonia cylindrica* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 232, pl. 22, fig. 13.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

PROLOBELLA Ulrich

Prolobella corrugata Ruedemann

9008 HOLOTYPE *Prolobella corrugata* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 38, pl. 3, fig. 11.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

9009 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 3. fig. 10.
Whetstone Gulf formation Near Rome, N. Y.
Rust purchase

9010 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 3, fig. 12.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Prolobella ? trentonensis (Conrad)

9011 HYPOTYPE *Avicula trentonensis* Conrad. Phila. Acad. Nat. Sci., Jour. 1842. 8: 240.
Prolobella ? trentonensis Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 97, pl. 5, fig. 4.
Canajoharie sh. Canajoharie, Montgomery co. N. Y.
R. Ruedemann, coll.

PROSOCOELUS Keferstein

Prosocoelus cf. orbicularis Beushausen

9012 HYPOPLASTOTYPE *Prosocoelus orbicularis* Beushausen. Geol. Specialkarte Preuss. u. Thüring. Staaten, Abh. 1884. Bd. 6, h. 1, p. 110.
Prosocoelus cf. *orbicularis* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 75, pl. 16, fig. 13.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Prosocoelus pes-anseris Zeiler & Wirtgen var. **occidentalis** Clarke

9013 COPLASTOTYPE *Prosocoelus pes-anseris* var. *occidentalis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 223; fig. p. 223.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 75, pl. 16, fig. 14.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

9014 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 223.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 16, fig. 15.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

PSILOCONCHA Ulrich

Psiloconcha subovalis (Ulrich)

9015 HYPOTYPE: HYPOPLASTOTYPE *Orthodesma subovale* Ulrich. Cin. Soc. N. H., Jour. 1879. 2: 8.

Psiloconcha subovalis Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 49, pl. 6, fig. 6.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

PTERINEA Goldfuss

Pterinea ?

9016 HYPOTYPE *Pterinea ?* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 19, fig. 7.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

Pterinea sp.

9017 HYPOTYPE: HYPOPLASTOTYPE *Pterinea* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 3, fig. 4.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pterinea sp. ?

9018 HYPOTYPE *Pterinea* sp. ? Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 12.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

9019 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 13.
Moose River ss. Stony brook, Moose river, Me.
O. O. Nylander, coll. 1905

Pterinea sp.

9020 HYPOTYPE *Pterinea* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 104, pl. 24, fig. 29.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

9021 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 30.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

9022 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 33.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

Pterinea ? sp.

9023 HYPOTYPE: HYPOPLASTOTYPE *Pterinea ?* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 31.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

9024 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 32.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

Pterinea ? sp.

9025 HYPOTYPE *Pterinea ?* sp. H. N. Eaton. N. Y. S. M. Bul. 253. 1924. p. 113, pl. 1, fig. 7.
Vernon sh. Two miles east of Jordan, Onondaga co. N. Y.
H. N. Eaton, coll. 1922

Pterinea sp. nov.

9026 HYPOTYPE *Pterinea* sp. nov. Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 20, fig. 6.
Whetstone Gulf sh.
Station 12 of Mill creek section, N. Y.
R. Ruedemann, coll.
On slab with types of *Zygospira modesta, Colpomya faba* mut. *intermedia, Triarthrus huguiensis;* all pl. 20, fig. 6.

Pterinea brisa (name preoccupied) see **Pterinea nylanderi**

Pterinea brisa (name preoccupied) var. **vexillum** see **Pterinea nylanderi** var. **vexillum**

Pterinea chapmani Clarke

9027 HOLOTYPE *Pterinea chapmani* Clarke. N. Y. S. M. Bul. 107. 1907. p. 203; fig. p. 203.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 103, pl. 25, fig. 11.

Chapman ss.

Edmunds hill, Chapman plantation, Aroostook co. Me.

O. O. Nylander, coll.

Pterinea (Caritodens) demissa (Conrad)

9028 HYPOTYPE *Avicula demissa* Conrad. Phila. Acad. Nat. Sci., Jour. 1842. 8: 242.

Emmons. Geol. N. Y., Rep't 2d Dist. 1842. p. 404, fig. 113, no. 2.

Pterinea (Caritodens) demissa Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 23, pl. 2, fig. 10.

Pulaski beds Jefferson co. N. Y.

H. F. Cleland, don.

9029 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 2, fig. 7.

Pulaski drift Near Trenton, N. Y.

Rust purchase

9030 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 2, fig. 8.

Pulaski drift Near Trenton, N. Y.

Rust purchase

9031 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 2, fig. 9.

Pulaski drift From towns of Trenton and Russia, N. Y.

Rust purchase

9032 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 2, fig. 11.

Pulaski drift Near Trenton, N. Y.

Rust purchase

Pterinea edmundi Clarke

9033 COPLASTOTYPE *Pterinea edmundi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 203; fig. p. 204.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 103, pl. 24, fig. 15.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

9034 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 204.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 17.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9035 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 12.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9036 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 13.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9037 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 14.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9038 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 16.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9039 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 18.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Pterinea edmundi Clarke var. **subrecta** Clarke

9040 COTYPE *Pterinea edmundi* var. *subrecta* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 104, pl. 24, fig. 19.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 190

9041 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 20.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Pterinea cf. **fasciculata** see **Cornellites** cf. **fasciculatus**

Pterinea fasciculata var. **occidentalis** see **Cornellites fasciculatus** var. **occidentalis**

Pterinea (Pteronitella ?) incurvata Clarke

9052 COTYPE *Pterinea (Pteronitella ?) incurvata* Clarke. N. Y. S. M. Bul. 107. 1907. p. 210; fig. p. 210.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 28, pl. 3, fig. 13.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9053 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 3, fig. 17.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9054 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 3, fig. 18.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pterinea insueta (Emmons)

9055 HYPOTYPE *Avicula insueta* Emmons. Geol. N. Y., Rep't 2d Dist. 1842. p. 399.
Pterinea insueta Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 23, pl. 2, fig. 5.
Up. Utica sh. Holland Patent, N. Y.
R. Ruedemann, coll.

Pterinea insueta (Emmons) mut. **bursa** Ruedemann

9056 HOLOTYPE (original & counterpart) *Pterinea insueta* mut. *bursa* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 23, pl. 2, fig. 4.
Deer River sh. Whetstone gulf, Lewis co. N. Y.
R. Ruedemann, coll.

Pterinea intercostata Clarke

9057 COTYPE: COPLASTOTYPE *Pterinea intercostata* Clarke. N. Y. S. M. Bul. 107. 1907. p. 206; fig. p. 206.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 26, pl. 3. fig. 9.
Dalhousie beds — Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pterinea jordani H. N. Eaton

9058 HOLOTYPE *Pterinea jordani* H. N. Eaton. N. Y. S. M. Bul. 253. 1924. p. 113, pl. 1, fig. 8.
Vernon sh. Two miles east of Jordan, Onondaga co. N. Y.
H. N. Eaton, coll. 1922

Pterinea mainensis Clarke

9059 COTYPE *Pterinea mainensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 201; fig. p. 201.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 71, pl. 14, fig. 3.
Moose River ss. — Blind Cove point, Telos lake, Me.
O. O. Nylander, coll. 1905

9060 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 201.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 14, fig. 4.
Moose River ss. — Telos lake dam, Me.
O. O. Nylander, coll. 1905

9061 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 201.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 14, fig. 5.
Moose River ss.
Seven miles north of Kineo bay, Moosehead lake, Me.
O. O. Nylander, coll. 1905

9062 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 14, fig. 6.
Moose River ss.
Seven miles north of Kineo bay, Moosehead lake, Me.
O. O. Nylander, coll. 1905

On slab with type of *Pterinea mainensis,* pl. 14, fig. 7.

9063 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 14, fig. 7.
Moose River ss.
Seven miles north of Kineo bay, Moosehead lake, Me.
O. O. Nylander, coll. 1905
On slab with type of *Pterinea mainensis,* pl. 14, fig. 6.

Pterinea modiolaris see **Modiodesma modiolare**

Pterinea moneris Clarke

9064 COTYPE *Pterinea moneris* Clarke. N. Y. S. M. Bul. 107. 1907. p. 202; fig. p. 202.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 73, pl. 13, fig. 6.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

9065 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 202.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 7.
Moose River ss. Webster lake, Me.
O. O. Nylander, coll. 1905

9066 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 202.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 8, 9.
Moose River ss. Webster lake, Me.
O. O. Nylander, coll. 1905

Pterinea nylanderi Flower

9067 HOLOTYPE: HOLOPLASTOTYPE *Pterinea brisa* Clarke (name preoccupied). N. Y. S. M. Bul. 107. 1907. p. 208; fig. p. 209.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 104, pl. 25, fig. 10.
Pterinea nylanderi Flower. Jour. Pal. 1945. v. 19, no. 1, p. 76.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

Pterinea nylanderi Flower var. **vexillum** Clarke

9068 COTYPE (original & counterpart) *Pterinea brisa* (name preoccupied) var. *vexillum* Clarke. N. Y. S. M. Bul. 107. 1907. p. 209; fig. p. 209.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 28, pl. 3, fig. 5.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9069 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 209.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 3, fig. 6.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pterinea obtusiformis Ulrich

9070 HYPOTYPE *Pterinea obtusiformis* (Ulrich ms.) Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 26, pl. 2, fig. 6.
Whetstone Gulf sh. Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

Pterinea poststriata Ruedemann

9071 COTYPE *Pterinea poststriata* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 74, pl. 25, fig. 5.
Pittsford sh. Pittsford, Monroe co. N. Y.

9072 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 25, fig. 6.
Pittsford sh. Pittsford, Monroe co. N. Y.

9073 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 25. fig. 7.
Pittsford sh. Pittsford, Monroe co. N. Y.

Pterinea cf. **pseudolaevis** (Oehlert)

9074 HYPOPLASTOTYPE *Avicula pseudolaevis* Oehlert. Soc. Geol. Fr., Mem. 3e Ser. 1881. t. 2, p. 83.
Pterinea cf. *pseudolaevis* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 26, pl. 3, fig. 3.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
C. Schuchert, coll.

Type in U.S.N.M.

Pterinea radialis Clarke

9075 COTYPE *Pterinea radialis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 207; fig. p. 207.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 72, 103, pl. 14, fig. 1.
Moose River ss.
One mile above dam, on east side of Matagamon lake, Me.
O. O. Nylander, coll. 1905

9076 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 207.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 14, fig. 2.
Moose River ss.
Seven miles north of Kineo bay, Moosehead lake, Me.
O. O. Nylander, coll. 1905

9077 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 207.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 21.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

9078 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 207.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 23.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9079 HYPOTYPE: HYPOPLASTOTYPE Clarke. N Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 10.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

9080 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 11.
Moose River ss.
Cunninghams' camp, near Metagamon lake, Me.
O. O. Nylander, coll. 1905

9081 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 13, fig. 14.
Moose River ss Matagamon lake, Me.
O. O. Nylander, coll. 1905

9082 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 22.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9083 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 24.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Pterinea rotunda H. N. Eaton

9084 HOLOTYPE *Pterinea rotunda* H. N. Eaton. N. Y. S. M. Bul. 253. 1924. p. 113, pl. 1, fig. 6.
Vernon sh.
Two miles east of Jordan, Onondaga co. N. Y.
H. N. Eaton, coll. 1922

Pterinea textilis var. **arenaria** see **Actinopteria textilis** var. **arenaria**

PTERINOPECTEN Hall

Pterinopecten sp.

9085 MORPHOTYPE *Pterinopecten* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12 (I).
Whitesville beds 1½ miles northwest of Andover, N. Y.
J. G. Woodruff, coll. & don. 1934

Pterinopecten aroostooki Clarke

9086 COPLASTOTYPE *Pterinopecten aroostooki* Clarke. N. Y. S. M. Bul. 107. 1907. p. 199; fig. p. 200.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 105, pl. 24, fig. 26.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

9087 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 200.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 28.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9088 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 25.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9089 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 27.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Pterinopecten denysi Clarke

9090 HOLOTYPE: HOLOPLASTOTYPE *Pterinopecten denysi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 199; fig. p. 199.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 25, pl. 3, fig. 7.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pterinopecten proteus Clarke mutation

9091 COTYPE *Pterinopecten proteus* mutation Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 156, pl. 18, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9092 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 18, fig. 3.
Grande Grève ls. Indian cove, Gaspé, P. Q.
J. M. Clarke, coll. 1900

PTERONITELLA Billings

Pteronitella hirundo Clarke

9093 HYPOPLASTOTYPE *Pteronitella hirundo* Clarke. N. Y. S. M. Bul. 107. 1907. p. 211.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 29, pl. 4, fig. 8.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
C. Schuchert, coll.
Type in U. S. N. M.

9094 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 4, fig. 11.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pteronitella passer Clarke

9095 HYPOTYPE *Pteronitella passer* Clarke. N. Y. S. M. Bul. 107. 1907. p. 212.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 30, pl. 4, fig. 13.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pteronitella peninsulae Clarke

9096 COTYPE *Pteronitella peninsulae* Clarke. N. Y. S. M. Bul. 107. 1907. p. 212; fig. p. 213.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 105, pl. 25, fig. 8.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

9097 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 213.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 25, fig. 9.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

PTYCHOPTERIA Hall

Ptychopteria sp.

9099 MORPHOTYPE *Ptychopteria* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 19 (C).
Cattaraugus beds Three miles east of Andover, N. Y.
J. G. Woodruff, coll. & don. 1934

Ptychopteria eucrate Hall

9100 HYPOTYPE *Ptychopteria eucrate* Caster. Bul. Amer. Pal. 1930. v. 15, no. 58, p. 69, pl. 30, fig. 12.
Chemung (?) beds Panama, N. Y.
J. Hall, coll. 1871

On slab with type of *Ptychopteria eucrate,* Pal. N. Y., v. 5, pt 1, pl. 85, fig. 28.

Ptychopteria expansa see **Oleanella** cf. **expansa**

RHYTIMYA Ulrich

Rhytimya sp.

9101 HYPOTYPE *Rhytimya* sp. Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 54, pl. 6, fig. 12.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

"Rhytimya" buffaloensis Ruedemann

9102 COTYPE *Rhytimya buffaloensis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 51, pl. 15, fig. 6.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

9103 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 15, fig. 7.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Rhytimya compressa Ulrich

9104 HYPOTYPE *Rhytimya compressa* Ulrich. Ohio Geol. Surv. 1893. 7: 692.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 50, pl. 6, fig. 7.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

9105 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 6, fig. 8.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Rhytimya plana Ruedemann

9106 HOLOTYPE *Rhytimya plana* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 51, pl. 6, fig. 13.
Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Rhytimya producta Ulrich

9107 HYPOTYPE *Rhytimya producta* Ulrich. Ohio Geol. Surv. 1893. *7*: 688.

Ruedemann. N. Y. S. M. Bul. *272*. 1926. p. 51, pl. 6, fig. 10.

Pulaski beds Lorraine gorge, N. Y.

R. Ruedemann, coll.

9108 HYPOTYPE Ruedemann. N. Y. S. M. Bul. *272*. 1926. pl. 6, fig. 11.

Pulaski beds Station 14 of Whetstone gulf section, N. Y.

R. Ruedemann, coll.

Rhytimya radiata Ulrich

9109 HYPOTYPE *Rhytimya radiata* Ulrich. Ohio Geol. Surv. 1893. *7*: 692.

Ruedemann. N. Y. S. M. Bul. *272*. 1926. p. 50, pl. 6, fig. 9.

Whetstone Gulf sh.

Station 7 of Whetstone gulf section, N. Y.

R. Ruedemann, coll.

SAFFORDIA Ulrich

Saffordia ulrichi Ruedemann

9110 HOLOTYPE *Saffordia ulrichi* Ruedemann. N. Y. S. M. Bul. *162*. 1912. p. 107, pl. 6, fig. 17, 18.

Schenectady beds Schenectady, N. Y.

R. Ruedemann, coll.

SCHIZODUS King

Schizodus appressus (Conrad)

9111 HYPOTYPE: HYPOPLASTOTYPE *Nuculites appressa* Conrad. Phila. Acad. Nat. Sci., Jour. 1842. *8*: 248.

Schizodus appressus Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 232, pl. 23, fig. 11.

Gaspé ss. Gaspé basin, Gaspé, P. Q.

J. M. Clarke, coll. 1904

Schizodus cuneus Hall ?

9112 HYPOTYPE *Schizodus cuneus* Hall. Pal. N. Y. 1885. v. 5, pt 1, no. 2, p. 458.

Schizodus cuneus ? Beede. N. Y. S. M. Bul. 149. 1911. p. 181; fig. p. 182.

Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

On slab with types of *Conularia sorrocula,* figures p. 184; *Orbiculoidea limata,* right fig. p. 177.

Schizodus denysi Beede

9113 COTYPE *Schizodus denysi* Beede. N. Y. S. M. Bul. 149. 1911. p. 182; left fig. p. 182.

Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

On slab with type of *Aviculopinna egena,* fig. p. 182.

9114 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. mid. fig. p. 182.

Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

9115 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. right fig. p. 182.

Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

Schizodus richardsoni Beede

9116 HOLOTYPE *Schizodus richardsoni* Beede. N. Y. S. M. Bul. 149. 1911. p. 171; fig. p. 171.

Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

Schizodus ventricosus (Billings) ?

9117 HYPOTYPE: HYPOPLASTOTYPE *Anodontopsis ventricosa* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 55.

Schizodus ventricosus ? Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 162, pl 23, fig. 10.

Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Sedgwickia (Grammysia?) neglecta see **Cuneamya** aff. **neglecta**

Solen simplex see **Palaeosolen simplex**

SOLENOMYA Lamarck

Solenomya ? insperata Ruedemann

9118 COTYPE *Solenomya ? insperata* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 105, pl. 6, fig. 13.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

9119 COTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 6, fig. 14.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

SOLENOPSIS McCoy

Solenopsis sp.

9120 HYPOTYPE *Solenopsis* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 78, pl. 17, fig. 1.
Moose River ss. Baker Brook point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

9121 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 17, fig. 2.
Moose River ss. Baker Brook point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

SPHENOTUS Hall

Sphenotus sp.

9124 MORPHOTYPE *Sphenotus* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12 (C).
Whitesville beds
1½ miles northwest of Andover, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

9125 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 12 (F).
Whitesville beds
1½ miles northwest of Andover, Allegany co. N. Y.
J. G. Woodruff, coll. & don. 1934

Sphenotus ellsi Clarke

9126 COTYPE *Sphenotus ellsi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 226; fig. p. 226.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 32, pl. 4, fig. 25.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Sphenotus truncatus (Conrad)

9127 HYPOPLASTOTYPE *Sphenotus truncatus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 232, pl. 22, fig. 9.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

9128 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 22, fig. 10.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

9129 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 22, fig. 11.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

9130 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 22, fig. 12.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

STREPTOMYTILUS Kindle & Breger

Streptomytilus eduliformis (Clarke & Ruedemann)

9131 HOLOTYPE *Mytilarca eduliformis* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 47, pl. 5, fig. 8, 9, 10.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

WHITEAVESIA Ulrich

Whiteavesia cincta Ruedemann

9132 HOLOTYPE: HOLOPLASTOTYPE *Whiteavesia cincta* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 95, pl. 5, fig. 1.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Whiteavesia cumingsi Ruedemann

9133 HOLOTYPE *Whiteavesia cumingsi* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 96, pl. 5, fig. 2.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

9134 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 5, fig. 3.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Whiteavesia nasuta (Conrad)

9135 HYPOTYPE *Whiteavesia nasuta* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 42, pl. 5, fig. 3.
Pulaski ss. Talcott's quarry, near Rome, N. Y.
R. Ruedemann, coll.

9136 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 5, fig. 4.
Pulaski ss. Talcott's quarry, near Rome, N. Y.

9137 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 5, fig. 5.
Pulaski ss. Drift near Trenton, N. Y.
Rust purchase

9138 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 5, fig. 6.
Pulaski ss. Drift near Trenton, N. Y.
Rust purchase

WHITELLA Ulrich

Whitella elongata Ruedemann

9139 HOLOTYPE *Whitella elongata* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 98, pl. 5, fig. 9, 10.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

GASTROPODA

ANTICALYPTRAEA Quenstedt

"Anticalyptraea" beecheri (Clarke)

9142 HYPOTYPE *Autodetus beecheri* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 117, pl. 11, fig. 1.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9143 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 11, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9144 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 138, pl. 32, fig. 1, 2.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

ARCHINACELLA Ulrich & Scofield

Archinacella orbiculata (Hall)

9145 HYPOTYPE: HYPOPLASTOTYPE *Carinaropsis orbiculatus* Hall. Pal. N. Y. 1947. 1 : 306.
Archinacella orbiculata Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 108, pl. 7, fig. 1, 2.
Snake Hill sh. Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

Archinacella subcarinata Ruedemann

9146 HOLOTYPE *Archinacella subcarinata* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 58, pl. 8, fig. 2.
Whetstone Gulf sh.
Station 9 of Wood creek section, N. Y.
R. Ruedemann, coll.

9147 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 8, fig. 1.
Whetstone Gulf sh.
Station 22 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Autodetus beecheri see **Anticalyptraea beecheri**

BELLEROPHON Montfort

Bellerophon sp.

9148 HYPOPLASTOTYPE *Bellerophon* sp. Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 230, pl. 17, fig. 23, 24.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.
Type in U. S. N. M.

Bellerophon brevilineatus see **Bucanella brevilineata**

Bellerophon cancellatus see **Sinuites cancellatus**

Bellerophon (Bucanella ?) gaspensis Clarke

9149 HOLOTYPE *Bellerophon (Plectonotus ?) gaspensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 194; figures p. 194.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 154, pl. 17, fig. 17, 18.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Bellerophon (Plectonotus ?) gaspensis see **Bellerophon (Bucanella ?) gaspensis**

Bellerophon lyra Hall

9150 HOLOTYPE *Bellerophon lyra* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 59 (advance sheets, 1861. p. 31).
Hall. Illus. Dev. Foss., N. Y. G. S., Pal. 1877. Gasteropoda, pl. 24, fig. 15, 16.
Hall. Pal. N. Y. 1879. v. 5, pt 2, p. 113, pl. 23, fig. 19, 20.
Hamilton beds Fultonham, N. Y.

Bellerophon plenus Billings

9151 HYPOTYPE *Bellerophon plenus* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 62.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 153, pl. 17, fig. 25.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll. 1904

9152 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 26.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9153 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 27, 28.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Bellerophon quadrilobatus Salter

9154 HYPOTYPE *Bellerophon (Euphemus) quadrilobatus* Salter. Geol. Soc. London, Mem. Ser. 2. 1856. 7: 214.
Bellerophon quadrilobatus Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 9, fig. 11.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 12, fig. 8.
Devonian Pebble Isl., West Falkland
Gov. and Mrs Allardyce, donors

Bellerophon (Euphemus) quadrilobatus see **Bellerophon quadrilobatus**

Bellerophon rotalinea see **Tropidodiscus rotalinea**

Bellerophon rugosus see **Tetranota rugosa**

BEMBEXIA Oehlert

Bembexia sulcomarginata (Conrad) var. **leclercqi** (Clarke)

9334 HOLOPLASTOTYPE *Pleurotomaria sulcomarginata* var. *leclercqi* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 228, pl. 16, fig. 15, 16.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

BUCANELLA Meek

Bucanella brevilineata (Conrad)

9370 HYPOTYPE *Tropidocyclus brevilineatus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 229, pl. 17, fig. 8, 9.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9371 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 10, 11.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9372 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 12.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9373 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 13.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9374 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 14.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9375 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 15.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9376 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 16.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9377 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 139, pl. 32, fig. 4.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9378 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 5.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1905

9379 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 6, 7.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1905

Bucanella derbyi (Clarke)

9314 HYPOTYPE *Plectonotus derbyi* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 69, pl. 12, fig. 17, 18.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll.

9315 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 12, fig. 19.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll.

Bucanella cf. derbyi (Clarke)

9316 HYPOTYPE *Plectonotus* cf. *derbyi* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 98, pl. 24, fig. 1.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

9317 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 2.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9318 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 3.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9319 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 4.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9320 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 5, 9.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

9321 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 6.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

9322 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 7.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

9323 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 24, fig. 10.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll.

BUCANIA Hall

Bucania bidorsata see **Tetranota bidorsata**

Bucania rara (Ruedemann)

9255 HOLOTYPE *Kokenospira rara* Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 106; p. 107, fig. 61.
Snake Hill beds Watervliet, near Albany, N. Y.
R. Ruedemann, coll.

BUCANOPSIS Ulrich & Scofield

Bucanopsis perelegans White & Whitfield var. **minima** Beede

9155 COTYPE *Bucanopsis perelegans* var. *minima* Beede. N. Y. S. M. Bul. 149. 1911. p. 183; mid. fig. and right fig. p. 183.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

9156 COTYPE Beede. N. Y. S. M. Bul. 149. 1911. left fig. p. 183.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

Callonema cf. bellatulum see **Elasmonema cf. bellatulum**

Capulus kahlebergensis see **Platyceras kahlebergense**

CARINAROPSIS Hall

"Carinaropsis" diopetes (Clarke)

9278 COPLASTOTYPE *Phragmostoma diopetes* Clarke. N. Y. S. M. Bul. 107. 1907. p. 192; fig. p. 193.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 70, pl. 12, fig. 11.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

9279 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 193.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 12, fig. 12.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

9280 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 193.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 12, fig. 13.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

9281 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 12, fig. 9.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

"Carinaropsis" nitela (Clarke)

9282 COPLASTOTYPE *Phragmostoma nitela* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 139, pl. 32, fig. 27.
Oriskany ss. Pine hill, Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9283 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 28.
Oriskany ss. Pine hill, Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9284 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 29.
Oriskany ss. Pine hill, Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9285 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 30.
Oriskany ss. Pine hill, Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Carinaropsis orbiculatus see **Archinacella orbiculata**

CLATHROSPIRA Ulrich & Scofield

Clathrospira conica Ulrich & Scofield

9160 HYPOTYPE *Clathrospira conica* Ulrich & Scofield. Geol. Minn. 1897. v. 3, pt 2, p. 1008.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 73, pl. 9, fig. 10.
Pulaski drift Near Trenton, N. Y.
Rust purchase

9161 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 9, fig. 11.
Pulaski beds Pulaski, N. Y.
R. Ruedemann, coll.

Clioderma canaliculata see **Pterotheca** cf. **canaliculata**

Coelidium hebe see **Coelocaulus hebe**

Coelidium macrospira see **Coelocaulus macrospira**

Coelidium strebloceras see **Coelocaulus strebloceras**

Coelidium tenue see **Coelocaulus tenuis**

Coelidium cf. **vitellia** see **Coelocaulus** cf. **vitellia**

COELOCAULUS Oehlert

Coelocaulus hebe (Billings)

9162 HYPOTYPE *Murchisonia hebe* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 57.
Coelidium hebe Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 153, pl. 17, fig. 32.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Coelocaulus macrospira (Hall)

9163 HYPOTYPE *Coelidium macrospira* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 65, pl. 7, fig. 2, 5.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9164 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 7, fig. 3.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9165 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 7, fig. 4.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9166 HYPOTYPE: HYPOPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 7, fig. 6.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9167 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 7, fig. 7.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9168 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 7, fig. 8.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Coelocaulus strebloceras (Clarke)

9169 HOLOTYPE *Coelidium strebloceras* Clarke. N. Y. S. M. Bul. 107. 1907. p. 189; fig. p. 189.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 23, pl. 2, fig. 7.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9170 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 2, fig. 8.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Coelocaulus tenuis (Clarke)

9171 COTYPE: COPLASTOTYPE *Coelidium tenue* Clarke. N. Y. S. M. Bul. 107. 1907. p. 190; fig. p. 190.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 99, pl. 23, fig. 9.

Chapman ss.

Presque Isle stream, Chapman plantation, Aroostook co. Me.

O. O. Nylander, coll. 1905

9172 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 190.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 10.

Chapman ss.

Presque Isle stream, Chapman plantation, Me.

O. O. Nylander, coll. 1905

9173 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 8.

Chapman ss.

Presque Isle stream, Chapman plantation, Me.

O. O. Nylander, coll. 1905

Coelocaulus cf. **vitellia** (Billings)

9174 HYPOTYPE *Murchisonia vitellia* Billings. Can. G. S., Paleo. Foss. 1865. 1:156 (advance sheets, 1862).

Coelidium cf. *vitellia* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 67, pl. 7, fig. 9, 10.

Guelph dol. Rochester, N. Y.

A. L. Arey, coll.

CYCLONEMA Hall

Cyclonema cushingi Ruedemann

9175 HOLOTYPE: HOLOPLASTOTYPE (mold & cast) *Cyclonema cushingi* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 110, pl. 7, fig. 8, 9, 10.

Snake Hill beds Snake hill, Saratoga co. N.Y.

R. Ruedemann, coll.

Cyclonema montrealense Billings

9176 HYPOTYPE: HYPOPLASTOTYPE *Cyclonema montrealensis* Billings. Can. G. S., Paleo Foss. 1865. 1: 30 (advance sheets, 1862).

Cyclonema montrealense Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 110, pl. 7, fig. 7.

Snake Hill beds Snake hill, Saratoga co. N.Y.
R. Ruedemann, coll.

CYCLORA Hall

Cyclora minuta Hall

9177 HYPOTYPE *Cyclora minuta* Hall. Amer. Jour. Sci. 1845. 48: 294.

Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 77, pl. 10, fig. 1.

Pulaski drift Near Trenton, N. Y.
Rust purchase

Cyclora parvula (Hall)

9178 HYPOTYPE *Turbo ? parvulus* Hall. Amer. Jour. Sci. 1845. 48: 294.

Cyclora parvula Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 77, pl. 10, fig. 4.

Pulaski beds Station 23 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

Cyclora cf. **pulcella** Miller

9179 HYPOTYPE *Cyclora pulcella* Miller. Cin. Soc. N. H., Jour. 1882. 5: 231.

Cyclora cf. *pulcella* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 77, pl. 10, fig. 3.

Pulaski beds Station 22a of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

CYRTOLITES Conrad

"Cyrtolites" expansus Hall

9180 HYPOTYPE *Cyrtolites expansus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 69, pl. 12, fig. 14, 15.

Moose River ss.
Cunningham's camp, near Matagamon lake, Me.
O. O. Nylander, coll. 1905

9181 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 12, fig. 16.
Moose River ss.
Cunningham's camp, near Matagamon lake, Me.
O. O. Nylander, coll. 1905

Cyrtolites ornatus Conrad

9182 HYPOTYPE *Cyrtolites ornatus* Conrad. N. Y. S. Geol. Surv., Ann. Rep't 2. 1838. p. 118.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 60, pl. 8, fig. 3.
Pulaski drift Near Trenton, N. Y.
Rust purchase
On slab with type of *Eotomaria pagoda,* pl. 9, fig. 7.

Diaphorostoma sp. see **Platyceras (Platyostoma)** sp.

Diaphorostoma allardycei see **Platyceras (Platyostoma) allardycei**

Diaphorostoma desmatum see **Platyceras (Platyostoma) desmatum**

Diaphorostoma niagarense see **Platyceras (Platyostoma) cornutum**

Diaphorostoma pastillus see **Platyceras (Platyostoma) pastillus**

Diaphorostoma perceense see **Platyceras (Platyostoma) perceense**

ECCULIOMPHALUS Portlock

Ecculiomphalus trentonensis (Conrad) mut. **fimbriatus** (Ruedemann)

9195 HOLOTYPE *Eccyliomphalus trentonensis* mut. *fimbriatus* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 74, pl. 9, fig. 12.
Whetstone Gulf sh.
Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

Eccyliomphalus trentonensis mut. **fimbriatus** see **Ecculiomphalus trentonensis** mut. **fimbriatus**

ELASMONEMA Fisher

Elasmonema cf. **bellatulum** (Hall)

9158 HYPOPLASTOTYPE *Loxonema bellatula* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 14. 1861. p. 104.

Callonema cf. *bellatulum* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 228, pl. 15, fig. 8.

Gaspé ss. Gaspé basin, Gaspé, P. Q.

J. M. Clarke, coll.

EOTOMARIA Ulrich & Scofield

"Eotomaria" ?

9196 HYPOTYPE *Eotomaria ?* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 16, fig. 20.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll. 1904

Eotomaria areyi Clarke & Ruedemann

9197 HOLOTYPE *Eotomaria areyi* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 68, figures p. 69; pl. 8, fig. 2.

Guelph dol. Rochester, N. Y.

A. L. Arey, coll.

Eotomaria sp. cf. **canalifera** Ulrich & Scofield

9198 ONOMATYPE *Eotomaria canalifera* Ulrich & Scofield. Geol. Minn. 1897. v. 3, pt 2, p. 1002.

Eotomaria sp. cf. *canalifera* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 72.

Whetstone Gulf sh.

Station 1 of Wood creek section, N. Y.

R. Ruedemann, coll. 1915

"Eotomaria" delia (Billings)

9199 HYPOTYPE *Pleurotomaria delia* Billings. Can. G. S., Paleo. Foss. 1874. v. 2, pt 1, p. 61.

Eotomaria delia Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 151, pl. 16, fig. 8.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll. 1904

9200 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 16, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

Eotomaria durhamensis (Whiteaves)

9201 HYPOTYPE *Pleurotomaria durhamensis* Whiteaves. Can. G. S., Paleo. Foss. 1884. v. 3, pt 1, p. 24.
Eotomaria durhamensis Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 68, pl. 10, fig. 17.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

"Eotomaria" hitchcocki Clarke

9202 HOLOPLASTOTYPE *Eotomaria hitchcocki* Clarke. N. Y. S. M. Bul. 107. 1907. p. 190; figures p. 191.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 100, pl. 23, fig. 12, 13, 14.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905
On slab with type of *Eotomaria hitchcocki*, pl. 23, fig. 19.

9203 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 11.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9204 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 15.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9205 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 16.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9206 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 17.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9207 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 18.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9208 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 19.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

On slab with type of *Eotomaria hitchcocki,* pl. 23, fig. 12, 13, 14.

Eotomaria kayseri Clarke & Ruedemann

9209 HOLOTYPE *Eotomaria kayseri* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 70, pl. 7, fig. 1; pl. 8, fig. 1.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Eotomaria pagoda Ruedemann

9210 PARATYPE *Eotomaria pagoda* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 72, pl. 9, fig. 7.
Pulaski drift Near Trenton, N. Y.
Rust purchase

On slab with type of *Cyrtolites ornatus,* pl. 8, fig. 3.

"Eotomaria" (?) rotula Clarke

9211 HOLOTYPE *Eotomaria (?) rotula* Clarke. N. Y. S. M. Bul. 107. 1907. p. 191; figures p. 191.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 151, pl. 16, fig. 11, 12, 13, 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Euomphalus disjunctus see **Straparolus (Euomphalus) disjunctus**

Euomphalus exortivus? see **Straparolus (Euomphalus) exortivus?**

Euomphalus fairchildi see **Sinutropis fairchildi**

Euomphalus sulcatus see **Poleumita (?) sulcata**

EUPHEMITES Warthin

Euphemites ? sp.

9215 HYPOTYPE *Euphemus ?* sp. Beede. N. Y. S. M. Bul. 149. 1911. p. 184; fig. p. 184.
Mississippian Oyster basin, Coffin isl., Magdalen isl.
J. M. Clarke, coll.

"Euphemites" ? quebecensis (Clarke)

9216 COPLASTOTYPE *Euphemus ? quebecensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 193; fig. p. 194.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 229, pl. 17, fig. 19, 21.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9217 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 194.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 20, 22.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

Euphemus ? sp. see **Euphemites ? sp.**

Euphemus ? quebecensis see **Euphemites ? quebecensis**

HERCYNELLA Kayser

Hercynella buffaloensis O'Connell

9227 HYPOTYPE *Hercynella buffaloensis* O'Connell. Buffalo Soc. Nat. Sci., Bul. 1914. 11, no. 1, p. 96.
Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 52, pl. 15, fig. 8, 9.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

HOLOPEA Hall

"Holopea" sp.

9228 HYPOPLASTOTYPE *Holopea* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 23.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

9229 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 24.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

"Holopea" cf. antiqua (Vanuxem)

9230 HYPOTYPE *Littorina antiqua* Vanuxem. Geol. N. Y., Rep't 3d Dist. 1842. p. 112.
Holopea cf. *antiqua* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 148, pl. 15, fig. 12, 14.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll.

9231 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 15, fig. 13.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll. 1904

"Holopea" cf. antiqua (Vanuxem) var. **pervetusta** Hall

9232 HYPOTYPE *Holopea antiqua* var. *pervetusta* Hall. Pal. N. Y. 1859. 3:295.
Holopea cf. *antiqua* var. *pervetusta* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 23, pl. 1, fig. 14, 15.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9233 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 1, fig. 16.
Dalhousie beds Dalhousie, N. B.
J. M. Clarke, coll. 1900

"Holopea" beushauseni Clarke

9234 COTYPE *Holopea beushauseni* Clarke. N. Y. S. M. Bul. 107. 1907. p. 188; fig. p. 188.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 101, pl. 23, fig. 20.
Chapman ss.
Presque Isle stream, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

9235 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 188.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 21, 22.
Chapman ss.
Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

"Holopea" gaspesia Clarke

9236 COPLASTOTYPE *Holopea gaspesia* Clarke. N. Y. S. M. Bul. 107. 1907. p. 186; fig. p. 186.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 227, pl. 15, fig. 1.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

9237 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 186.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 15, fig. 3, 5.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

9238 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 15, fig. 2.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

9239 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 15, fig. 6.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

9240 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 15, fig. 7.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll

"Holopea" wakehami Clarke

9241 COPLASTOTYPE *Holopea wakehami* Clarke. N. Y. S. M. Bul. 107. 1907. p. 186; fig. p. 187.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 228, pl. 15, fig. 9.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9242 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 187.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 15, fig. 10.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9243 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 15, fig. 11.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

HORMOTOMA Salter

Hormotoma gracilis (Hall) var. pusilla Ruedemann

9244 HOLOTYPE *Hormotoma gracilis* var. *pusilla* Ruedemann. G. S. A., Mem. 2. 1934. p. 90, pl. 20, fig. 3, 4.
Canajoharie sh. Rural cemetery, near Albany, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1899

Hormotoma gracilis (Hall) var. sublaxa Ulrich & Scofield

9245 HYPOTYPE *Hormotoma gracilis* var. *sublaxa* Ulrich & Scofield. Geol. Minn. 1897. v. 3, pt 2, p. 1015.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 67, pl. 8, fig. 14.
Pulaski beds Lorraine gorge, N. Y.
R. Ruedemann, coll.

Hormotoma gregaria Ruedemann

9246 HOLOTYPE *Hormotoma gregaria* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 73, pl. 25, fig. 3.
Bertie wl. Sweet quarry, Marcellus, N. Y.
D. D. Luther, coll. 1899
On slab with type of *Hormotoma gregaria,* pl. 25, fig. 4.

9247 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 25, fig. 4.
Bertie wl. Sweet quarry, Marcellus, N. Y.
D. D. Luther, coll. 1899
On slab with type of *Hormotoma gregaria,* pl. 25, fig. 3.

Hormotoma whiteavesi Clarke & Ruedemann

9248 COTYPE *Hormotoma whiteavesi* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 72, pl. 8, fig. 5.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9249 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 8, fig. 6.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9250 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 8, fig. 7, 9.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9251 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 8, fig. 8.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Kokenospira rara see Bucania rara

LIOSPIRA Ulrich & Scofield

Liospira micula (Hall)

9256 HYPOTYPE *Pleurotomaria micula* Hall. Wis. Geol. Surv., Rep't. 1862. p. 55.
Liospira micula Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 69, pl. 8, fig. 15, 16, 17.
Pulaski beds Pulaski, N. Y.
R. Ruedemann, coll.

9257 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 8, fig. 18.
Lorraine drift
Near Trenton, N. Y.
Rust purchase

Liospira vitruvia (Billings)

9258 HYPOTYPE *Pleurotomaria vitruvia* Billings. Can. G. S., Paleo. Foss. 1865. 1:171.
Liospira vitruvia Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 70, pl. 8, fig. 19.
Whetstone Gulf sh.
Station 10 of Wood creek section, N. Y.
R. Ruedemann, coll.

Littorina antiqua see **Holopea** cf. **antiqua**

Lophospira abbreviata see **Loxoplocus (Lophospira) abbreviatus**

Lophospira bilirata see **Loxoplocus (Lophospira) biliratus**

Lophospira bispiralis see **Loxoplocus (Lophospira) bispiralis**

Lophospira bowdeni see **Loxoplocus (Donaldiella) bowdeni**

LOXONEMA Phillips

Loxonema bellatula see **Elasmonema** cf. **bellatulum**

Loxonema ? compacta see **Melissosoa compacta**

Loxonema sp. cf. **funatum** Roemer

9266 HYPOTYPE *Loxonema funatum* Roemer. Palaeontogr. 1854. 3:126.
Loxonema sp. cf. *funatum* Clarke. N. Y. S. M. Bul. 107. 1907. p. 186; figures p. 186.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 102, pl. 23, fig. 25, 26.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me
O. O. Nylander, coll. 1905

Loxonema highlandense Clarke

9267 COPLASTOTYPE *Loxonema highlandense* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 140, pl. 32, fig. 21.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1902

9268 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 22.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1902

LOXOPLOCUS Fischer

Loxoplocus (Lophospira) abbreviatus (Hall)

9260 HYPOTYPE *Murchisonia uniangulata* Hall var. abbreviata Hall. Pal. N. Y. 1847. 1:304.
Lophospira abbreviata Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 65, pl. 8, fig. 12.
Lorraine beds Lorraine gorge, Jefferson co. N. Y.
R. Ruedemann, coll. 1907

"Loxoplocus (Lophospira)" biliratus (Hall)

9261 HYPOTYPE *Murchisonia bilirata* Hall. Pal. N. Y. 1859. 3:299.
Lophospira bilirata Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 106, pl. 16, fig. 19.
St Alban beds
Grande cavée, Griffon Cove river, Gaspé, P. Q.
J. M. Clarke, coll. 1900

Loxoplocus (Lophospira) bispiralis (Hall)

9262 HYPOTYPE *Lophospira bispiralis* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 71, pl. 10, fig. 7.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9263 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 10, fig. 8.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9264 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 10, fig. 9.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Loxoplocus (Donaldiella) bowdeni (Safford)

9265 HYPOTYPE: HYPOPLASTOTYPE *Murchisonia bowdeni* Safford. Geol. Tenn. 1869. p. 288.
Lophospira bowdeni Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 64, pl. 8, fig. 10.
Pulaski beds Pulaski, N. Y.
R. Ruedemann, coll.

Macrochilina sp. indet. see **Soleniscus** sp. indet.

MELISSOSOA Clarke

Melissosoa compacta (Hall)

9270 HYPOPLASTOTYPE *Loxonema ? compacta* Hall. Pal. N. Y. 1859. 3:297.
Melissosoa compacta Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 23, pl. 2, fig. 1.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9271 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 2, fig. 2.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9272 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 2, fig. 3.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9273 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 2, fig. 4.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9274 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 2, fig. 5.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9275 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 2, fig. 6.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Murchisonia bilirata see **Lophospira bilirata**

Murchisonia bowdeni see **Lophospira bowdeni**

Murchisonia hebe see **Coelocaulus hebe**

Murchisonia uniangulata var. **abbreviata** see **Lophospira abbreviata**

Murchisonia vitellia see **Coelocaulus** cf. **vitellia**

Phragmostoma diopetes see **Carinaropsis diopetes**

Phragmostoma nitela see **Carinaropsis nitela**

PLATYCERAS Conrad

Platyceras (Orthonychia) sp.

9287 HYPOTYPE *Platyceras* sp. Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 148, pl. 14, fig. 7, 16.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

Platyceras (Platyceras) sp.

9288 HYPOTYPE *Platyceras* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 24, pl. 1, fig. 13.
Dalhousie beds Stewart's cove, Dalhousie, N. B.

Platyceras (Platyostoma) sp.

9183 HYPOTYPE (original & counterpart) *Diaphorostoma* sp. Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 73; p. 73, fig. 32.
Bertie wl. Litchfield, N. Y.

Platyceras (Platyostoma) allardycei (Clarke)

9184 COTYPE *Diaphorostoma allardycei* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:175, pl. 9, fig. 8, 9.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 12, fig. 9, 10.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

9185 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 9, fig. 10.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 12, fig. 11.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

Platyceras (Orthonychia) belli Clarke

9289 HOLOTYPE *Platyceras (Orthonychia) belli* Clarke. N. Y. S. M. Bul. 107. 1907. p. 184; fig. p. 184.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 147, pl. 14, fig. 20.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9290 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 14, fig. 21.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Platyceras (Orthonychia) cf. **calantica** Hall and cf. **hebes** Clarke

9291 HYPOTYPE *Platyceras* cf. *calantica* and cf. *hebes* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 68, pl. 12, fig. 22, 23.
Moose River ss.
Cunningham's camp, near Matagamon lake, Me.
O. O. Nylander, coll. 1905

Platyceras (Platyostoma) cornutum Kindle & Breger

9187 HYPOTYPE *Platyceras (Diaphorostoma) cornutum* Kindle & Breger. Indiana Dept. Geol. and Nat. Res., Ann. Rep't 28. 1904. p. 453.
Diaphorostoma niagarense Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 59, pl. 10, fig. 14, 15.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Platyceras (Platyceras) coutoanum Katzer

9292 HOLOTYPE (original & counterpart) *Platyceras coutoanus* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46:10.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 276, pl. 13, fig. 12.
Devonian: Maecurú group Rio Maecurú, Brazil

Platyceras (Platyostoma) desmatum (Clarke)

9186 HYPOTYPE *Diaphorostoma desmatum* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 149, pl. 15, fig. 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Platyceras (Platyceras) cf. **fornicatum** Hall

9293 HYPOTYPE *Platyceras fornicatum* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 15. 1862. p. 35 (advance sheets, 1861. p. 7).
Platyceras cf. *fornicatum* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 145, pl. 14, fig. 8, 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Platyceras (Platyceras) gaspense Clarke

9294 HOLOPLASTOTYPE *Platyceras gaspense* Clarke. N. Y. S. M. Bul. 107. 1907. p. 182; fig. p. 182.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 227, pl. 14, fig. 15.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

Platyceras (Platyceras) gracile Katzer

9295 HOLOTYPE *Platyceras gracilis* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46:10.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 276, pl. 13, fig. 11a, b.
Devonian: Maecurú group Rio Maecurú, Brazil

Platyceras (Platyceras) guesnini Clarke

9296 COTYPE *Platyceras guesnini* Clarke. N. Y. S. M. Bul. 107. 1907. p. 183; figures p. 183.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 147, pl. 14, fig. 17, 18.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

9297 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 183.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 14, fig. 19.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll. 1904

Platyceras (Orthonychia) hebes Clarke

9298 HOLOTYPE *Platyceras hebes* Clarke. N. Y. S. M. Bul. 107. 1907. p. 185; figures p. 185.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 101, pl. 22, fig. 18, 19.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

9299 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 22 fig. 17.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Platyceras (Orthonychia) cf. hebes see Platyceras (Orthonychia) cf. calantica

Platyceras (Platyceras) kahlebergense (Beushausen)

9300 HYPOTYPE *Capulus kahlebergensis* Beushausen. Geol. Specialkarte Preuss. u. Thüring. Staaten, Abh. 1884. Bd. 6, h. 1, p. 53.
Platyceras kahlebergensis Clarke. N. Y. S. M. Bul. 107. 1907. p. 185; fig. p. 185.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 102, pl. 23, fig. 2, 3.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

9301 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 185.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 4, 5.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

9302 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 6, 7.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll.

Platyceras (Platyceras) leboutillieri Clarke

9303 COTYPE *Platyceras leboutillieri* Clarke. N. Y. S. M. Bul. 107. 1907. p. 181; fig. p. 182.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 145, pl. 14, fig. 1, 2.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

9304 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 182.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 14, fig. 3, 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9305 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 101, pl. 23, fig. 1.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll. 1905

Platyceras (Platyceras) lejeuni Clarke

9306 HOLOTYPE *Platyceras lejeunii* Clarke. N. Y. S. M. Bul. 107. 1907. p. 184; fig. p. 184.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 147, pl. 14, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Platyceras (Orthonychia) meerwarthi Katzer

9307 HOLOTYPE *Platyceras meerwarthi* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46:10.
Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 276, pl. 13, fig. 10a, b.
Devonian: Maecurú group Rio Maecurú, Brazil

Platyceras (Platyceras) cf. nodosum Conrad

9308 HYPOTYPE *Platyceras* cf. *nodosum* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 146, pl. 14, fig. 10, 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Platyceras (Platyostoma) pastillus (Clarke)

9188 COPLASTOTYPE *Diaphorostoma pastillus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 140, pl. 32, fig. 16, 17.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9189 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 18, 19.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9190 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 20.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Platyceras (Platyceras) paxillifer Clarke

9309 HOLOTYPE *Platyceras paxillifer* Clarke. N. Y. S. M. Bul. 107. 1907. p. 182; fig. p. 183.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 146, pl. 14, fig. 13, 14.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Platyceras (Platyostoma) perceense (Clarke)

9191 HOLOTYPE *Diaphorostoma perceense* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 149, pl. 15, fig. 22, 23.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

Platyceras (Orthonychia) subconicum Katzer

9310 HOLOTYPE *Platyceras subconicum* Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 277, pl. 13, fig. 13a, b, c.
Devonian: Maecurú group Rio Maecurú, Brazil

Platyceras (Orthonychia) tortuosum Hall

9311 HYPOTYPE *Platyceras tortuosum* Hall. Pal. N. Y. 1859. 3:472.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 146, pl. 14, fig. 23.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll. 1904

9312 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 14, fig. 24, 25.
Grande Grève ls. Percé rock, Percé, P. Q.

Platyceras (Orthonychia) tschernischewi Katzer

9313 HOLOTYPE *Platyceras tschernyschewii* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46:10.
Platyceras tschernischewi Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 276, pl. 13, fig. 14a, b, c.
Devonian: Maecurú group Rio Maecurú, Brazil

Plectonotus derbyi see **Bucanella derbyi**

Plectonotus cf. **derbyi** see **Bucanella** cf. **derbyi**

PLETHOSPIRA Ulrich & Scofield

Plethospira quadricarinata Ruedemann

9324 HOLOTYPE *Plethospira quadricarinata* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 71, pl. 9, fig. 2.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

9325 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 9, fig. 3.
Whetstone Gulf sh.
Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

9326 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 9, fig. 4.
Whetstone Gulf sh.
Station 9 of Wood creek section, N. Y.
R. Ruedemann, coll.

PLEUROTOMARIA Sowerby

Pleurotomaria delia see **Eotomaria delia**

Pleurotomaria durhamensis see **Eotomaria durhamensis**

"Pleurotomaria" haedillus Clarke

9328 COTYPE: COPLASTOTYPE *Pleurotomaria haedillus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 138, pl. 32, fig. 32.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9329 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 33, 35.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9330 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 34.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9331 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 36.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9332 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 37.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9333 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 38.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Pleurotomaria micula see **Liospira micula**

Pleurotomaria sulcomarginata var. **leclercqi** see **Bembexia sulcomarginata** var. **leclercqi**

Pleurotomaria vitruvia see **Liospira vitruvia**

POLEUMITA Clarke & Ruedemann

Poleumita crenulata (Whiteaves)

9335 HYPOTYPE *Poleumita crenulata* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 64, pl. 9, fig. 9, 11.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9336 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 17, 18.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9337 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 22.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9338 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 23.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9339 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 24.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Poleumita scamnata Clarke & Ruedemann

9340 COTYPE *Poleumita scamnata* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 60, pl. 9, fig. 1.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9341 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 2, 3, 5.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9342 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 4, 7.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9343 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 6.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9344 COPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 8.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9345 COTYPE: COPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 12, 14.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9346 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 13.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9347 COTYPE: COPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 9, fig. 15.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Poleumita (?) sulcata (Hall)

9348 HYPOTYPE *Euomphalus sulcatus* Hall. Geol. N. Y., Rep't 4th Dist. 1843. p. 138.

Poleumita (?) sulcata Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 62, pl. 10, fig. 1, 2.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9349 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 10, fig. 3, 4.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

PRAENATICA Perner

Praenatica expansa (Conrad) var.

9361 HOLOTYPE *Strophostylus expansus* var. Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 150, pl. 15, fig. 15, 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

PROTOSPIRA Ruedemann

Protospira minuta Ruedemann

9351 HOLOTYPE *Protospira minuta* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 72, pl. 25, fig. 1, 2.

Knight. G. S. A., Spec. P. no. 32. 1941. p. 277, pl. 45, fig. 4.
Hoyt ls.
Hoyt quarry, town of Greenfield, Saratoga co. N. Y.
R. Ruedemann, coll.

Protowarthia cancellata see **Sinuites cancellatus**

Protowarthia granistriata see **Sinuites granistriatus**

Protowarthia planodorsata see **Sinuites planodorsatus**

PTEROTHECA Salter

Pterotheca cf. canaliculata (Hall)

9429 HYPOTYPE *Clioderma canaliculata* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 14. 1861. p. 97.
Pterotheca cf. *canaliculata* Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 7, fig. 11.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

SEELYA Ulrich & Scofield

Seelya sp. nov.

9355 HYPOTYPE *Seelya* sp. nov. Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 70, pl. 9, fig. 1.
Whetstone Gulf sh.
Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll. 1915

SINUITES Koken

Sinuites cancellatus (Hall)

9352 HYPOTYPE *Sinuites cancellatus* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 62, pl. 8, fig. 6.
Pulaski beds Near Pulaski, N. Y.
Rust purchase

Sinuites granistriatus (Ulrich & Scofield)

9356 HYPOTYPE *Protowarthia granistriata* Ulrich & Scofield. Geol. Minn. 1897. v. 3, pt 2, p. 870.
Sinuites granistriata Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 63, pl. 8, fig. 7, 7a.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

9357 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 8, fig. 8.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

Sinuites planodorsatus (Ulrich & Scofield)

9358 HYPOTYPE *Protowarthia planodorsata* Ulrich & Scofield. Geol. Minn. 1897. v. 3, pt 2, p. 871.
Sinuites planodorsatus Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 61, pl. 8, fig. 5.
Whetstone Gulf sh.
Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

SINUTROPIS Perner

Sinutropis fairchildi (Clarke & Ruedemann)

9214 HOLOTYPE *Euomphalus fairchildi* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 75, pl. 8, fig. 3, 4.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

SOLENISCUS Meek & Worthen

"Soleniscus" sp. indet.

9269 HYPOTYPE *Macrochilina* sp. indet. Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 74, pl. 10, fig. 18.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Straparollus (?) sp. see **Straparolus (Straparolus)** (?) sp.

STRAPAROLUS Montfort

Straparolus (Straparolus) (?) sp.

9360 MORPHOTYPE *Straparollus (?)* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 19 (E).
Salamanca (?) cgl.
One mile northeast of Little Genesee "Rock City," N. Y.
J. G. Woodruff, coll. & don. 1934

Straparolus (Euomphalus) disjunctus (Hall)

9212 HYPOTYPE *Euomphalus disjunctus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 24, pl. 2, fig. 12, 13, 14.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Straparolus (Euomphalus) exortivus (Dawson) ?

9213 ONOMATYPE *Euomphalus exortivus* Dawson. Acadian Geol. 1868. p. 308.

Euomphalus exortivus ? Beede. N. Y. S. M. Bul. 149. 1911. p. 173.

Mississippian Cape le Trou, Grindstone isl., Magdalen Isl.
J. M. Clarke, coll.

On slab with type of *Aviculopecten lyelli,* low. left fig. p. 172.

Strophostylus expansus var. see **Praenatica expansa** var.

TETRANOTA Ulrich & Scofield

Tetranota bidorsata (Hall)

9362 HYPOTYPE *Bucania bidorsata* Hall. Pal. N. Y. 1847. 1:186.

Tetranota bidorsata Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 106; p. 107, fig. 60.

Snake Hill sh. North Albany, N. Y.
R. Ruedemann, coll.

Tetranota rugosa (Emmons)

9363 HYPOTYPE *Bellerophon rugosus* Emmons. Amer. Geol. 1855. v. 1, pt 2, p. 166.

Tetranota rugosa Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 63, pl. 8, fig. 9.

Whetstone Gulf sh.
Station 17 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

TREMANOTUS Hall

Tremanotus alpheus Hall

9364 HYPOTYPE *Trematonotus alpheus* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 5, fig. 20; pl. 6, fig. 1.

Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9365 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 5, fig. 22.

Guelph dol. Rochester, N. Y.
A. L. Arey purchase

Trematonotus alpheus see Tremanotus alpheus

TROCHONEMA Salter

Trochonema lescarboti Clarke

9366 HOLOPLASTOTYPE *Trochonema lescarboti* Clarke. N. Y. S. M. Bul. 107. 1907. p. 192; fig. p. 192.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 152, pl. 16, fig. 5.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

Trochonema (Eunema) nitidum Ulrich & Scofield

9367 HYPOTYPE *Trochonema (Eunema) nitidum* Ulrich & Scofield. Geol. Minn. 1897. v. 3, pt 2, p. 1053.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 74, pl. 9, fig. 13.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

9368 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 9, fig. 14.
Whetstone Gulf sh.
Station 12 of Moose creek section, N. Y.
R. Ruedemann, coll.

Tropidocyclus ? antarcticus see Tropidodiscus ? antarcticus

Tropidocyclus brevilineatus see Bucanella brevilineata

Tropidocyclus rotalinea see Tropidodiscus rotalinea

TROPIDODISCUS Meek & Worthen

Tropidodiscus ? antarcticus (Clarke)

9369 HOLOTYPE *Tropidocyclus ? antarcticus* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:174, pl. 9, fig. 6, 7.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 12, fig. 3, 4.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

Tropidodiscus obex Clarke

9386 COTYPE *Tropidodiscus obex* Clarke. N. Y. S. M. Bul. 107. 1907. p. 193; fig. p. 193.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 99, pl. 23, fig. 27, 28.
Chapman ss.
Edmunds hill, Chapman plantation, Aroostook co. Me.

9387 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 193.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 30.
Chapman ss. Edmunds hill, Chapman plantation, Me.

9388 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 23, fig. 29.
Chapman ss. Edmunds hill, Chapman plantation, Me.

Tropidodiscus cf. obex Clarke

9389 HYPOTYPE *Tropidodiscus* cf. *obex* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 69, pl. 12, fig. 20, 21.
Moose River ss. Matagamon lake dam, Me.
O. O. Nylander, coll. 1905

Tropidodiscus rotalinea (Hall)

9380 HYPOPLASTOTYPE *Tropidocyclus rotalinea* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 229, pl. 17, fig. 3.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9381 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 4.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9382 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 5.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9383 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 17, fig. 6.
Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll.

9384 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 139, pl. 32, fig. 23.
Oriskany ss. Pine hill, near Highland Mills, N. Y.

9385 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 24, 25, 26.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1905
On slab with type of *Nuculites fraxinus,* pl. 33, fig. 4.

Turbo ? parvulus see Cyclora parvula

Straparolus (Euomphalus) ? (Opercula of)

9393 HYPOTYPE Opercula of *Euomphalus ?* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 25, pl. 1, fig. 10.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9394 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 1, fig. 12.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

CONULARIDA*

COLEOLUS Hall

Coleolus acus (Clarke)

9395 HYPOTYPE: HYPOPLASTOTYPE *Coleolus acus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 138, pl. 32, fig. 9.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Coleolus acus,* pl. 32, fig. 12, 13, 14, 15.

9396 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 10.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9397 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 11.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

9398 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 12.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Coleolus acus,* pl. 32, fig. 9, 13, 14, 15.

9399 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 13.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Coleolus acus,* pl. 32, fig. 9, 12, 14, 15.

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* In Shimer and Shrock, Index Fossils of North America (1944), following Kiderlen (1937) and Knight (1937), *Conularia* is placed under the Scyphozoa; following Boucek (1939) and Kieslinger (1939), *Metaconularia* is placed under the Scyphozoa. *Coleolus* and *Hyolithes* are placed under Mollusca Incertae Sedis.

9400 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 14.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Coleolus acus,* pl. 32, fig. 9, 12, 13, 15.

9401 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 32, fig. 15.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

On slab with types of *Coleolus acus,* pl. 32, fig. 9, 12, 13, 14.

CONULARIA Miller

Conularia cataractensis Ruedemann

9402 HOLOTYPE *Conularia cataractensis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 67, pl. 22, fig. 7.
Whirlpool ss. member of Cataract formation
Niagara river gorge, N. Y.
E. Reinhard, coll.

Conularia cf. **desiderata** Hall

9403 HYPOTYPE *Conularia desiderata* Hall. Pal. N. Y. 1861. v. 3 (plates), explanation of pl. 72 A, fig. 4 (see also v. 3 (text). 1859. p. 480).

Conularia cf. *desiderata* Clarke. N. Y. S. M., Mem. 9. pt 1. 1908. p. 144, pl. 11, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll

Conularia desiderata Hall var. **tuzoi** Clarke

9404 HOLOTYPE: HOLOPLASTOTYPE *Conularia desiderata* var. *tuzoi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 181; fig. p. 181.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 144, pl. 11, fig. 13.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

Conularia filicosta Ruedemann

9405 HOLOTYPE *Conularia filicosta* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 69, pl. 22, fig. 4.
Rochester sh. Niagara river gorge, N. Y.
E. Reinhard, coll.

Conularia hudsoni Emmons

9406 HYPOTYPE *Conularia hudsoni* Emmons. Amer. Geol. 1855. v. 1, pt 2, p. 208.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 78, pl. 10, fig. 7, 8.
Pulaski beds Pulaski, N. Y.
Pickett coll.

Conularia cf. **huntiana** Hall

9407 HYPOTYPE: HYPOPLASTOTYPE *Conularia* cf. *huntiana* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 98, pl. 22, fig. 12.
Chapman ss. Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9408 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 22, fig. 13.
Chapman ss. Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Conularia lata Hall mut.

9409 COTYPE *Conularia lata* mut. Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 144, pl. 11, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9410 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 11, fig. 7, 8.
Grande Grève ls. Little Gaspé, P. Q.
J. M. Clarke, coll. 1904

9411 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 11, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

Conularia penouili Clarke

9412 HOLOTYPE *Conularia penouili* Clarke. N. Y. S. M. Bul. 107. 1907. p. 180; figures p. 180.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 144, pl. 11, fig. 10, 11.

Grande Grève ls.

Loose in brook at Peninsula opposite Gaspé basin, Quebec

J. M. Clarke, coll. 1904

Conularia perglabra see **Metaconularia perglabra**

Conularia planicostata Dawson

9413 ONOMATYPE *Conularia planicostata* Dawson. Acadian Geol. 1868. p. 307.

Beede. N. Y. S. M. Bul. 149. 1911. p. 174.

Mississippian Cape le Trou, Grindstone isl., Magdalen isl.

J. M. Clarke, coll.

Conularia sorrocula Beede

9414 HOLOTYPE (original & counterpart) *Conularia sorrocula* Beede. N. Y. S. M. Bul. 149. 1911. p. 184; figures p. 184.

Mississippian Oyster basin, Coffin isl., Magdalen isl.

J. M. Clarke, coll.

On slab with types of *Orbiculoidea limata,* right fig. p. 177; *Schizodus cuneus,* fig. p. 182.

Counterpart on slab with type of *Orbiculoidea limata.* left fig. p. 177.

Conularia tenuicosta Ruedemann

9415 HOLOTYPE *Conularia tenuicosta* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 68, pl. 22, fig. 1.

Gasport lens of Lockport ls. Gasport, N. Y.

E. Reinhard, coll.

9416 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 22, fig. 2.

Gasport lens of Lockport ls. Gasport, N. Y.

E. Reinhard, coll.

9417 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 22, fig. 3.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard, coll.

HYOLITHES Eichwald

Hyolithes sp.

9418 HYPOTYPE *Hyolithes* sp. Ruedemann. G. S. A., Mem. 2. 1934. p. 91, pl. 20, fig. 2.
Schaghticoke sh. Schaghticoke, N. Y.
R. Ruedemann, coll. 1902
On slab with type of sponge spicule, pl. 7, fig. 11.

Hyolithes cf. **aclis** Hall

9419 HYPOTYPE *Hyolithus* cf. *aclis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 226, pl. 12, fig. 18.
Gaspé ss. Gaspé basin, P. Q.
J. M. Clarke, coll.

Hyolithes oxys Clarke

9420 HOLOTYPE *Hyolithus oxys* Clarke. N. Y. S. M. Bul. 107. 1907. p. 179; figures p. 180.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 143, pl. 12, fig. 11, 12, 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9421 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 12, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
Charles Schuchert, coll.
Type in U. S. N. M.

Hyolithes pinniformis Ruedemann

9422 HOLOTYPE *Hyolithes pinniformis* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 111, pl. 7, fig. 12.
Canajoharie sh. Canajoharie, Montgomery co., N. Y.
R. Ruedemann, coll.

9423 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 7, fig. 13.
Canajoharie sh. Canajoharie, Montgomery co., N. Y.
R. Ruedemann, coll.

Hyolithes pumilus Ruedemann

9424 HOLOTYPE *Hyolithes pumilus* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 77, pl. 10, fig. 5.
Whetstone Gulf sh.
Station 6 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

9425 PARATYPE: PARAPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 10, fig. 6.
Whetstone Gulf sh.
Station 6 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

On slab with types of *Rafinesquina alternata* mut. *centristriata,* pl. 12, fig. 14; *Jonesella pedigera,* pl. 23, fig. 13, 14, 15.

Hyolithes richardi Clarke

9426 HOLOTYPE *Hyolithus richardi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 179; figures p. 179.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 143, pl. 12, fig. 14, 15, 16, 17.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Hyolithus cf. aclis see **Hyolithes cf. aclis**

Hyolithus oxys see **Hyolithes oxys**

Hyolithus richardi see **Hyolithes richardi**

METACONULARIA Foerste

Metaconularia perglabra (Ruedemann)

9427 HOLOTYPE *Conularia perglabra* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 69, pl. 22, fig. 6.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

9428 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 22, fig. 5.

Metaconularia perglabra Monahan. Amer. Midl. Nat. 1931. v. 12, no. 10, p. 391, pl. 1, fig. 2.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

PTEROPODA*

TENTACULITES Schlotheim

Tentaculites sp.

9430 HYPOTYPE (of description) *Tentaculites* sp. Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 66.
Gasport lens of Lockport ls. Gasport, N. Y.
E. Reinhard purchase

Tentaculites (?) acus see (under Conularida) **Coleolus acus**

Tentaculites cartieri Clarke

9431 COPLASTOTYPE *Tentaculites cartieri* Clarke. N. Y. S. M. Bul. 107. 1907. p. 174; fig. p. 174.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 226, pl. 12, fig. 1.
Gaspé ss. Gaspé basin, Quebec
Charles Schuchert, coll.
Type in U. S. N. M.

9432 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 174.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 12, fig. 2.
Gaspé ss. Gaspé basin, Quebec
J. M. Clarke, coll.

Tentaculites elongatus Hall

9433 HYPOPLASTOTYPE *Tentaculites elongatus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 118, pl. 12, fig. 8, 9.
Grande Grève ls. Grande Grève, P. Q.
Charles Schuchert, coll.
Type in U. S. N. M.

9434 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 138, pl. 32, fig. 8.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1905

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* In Shimer and Shrock, Index Fossils of North America (1944), *Tentaculites* is placed under Mollusca Incertae Sedis.

Tentaculites leclercqia Clarke

9435 COTYPE: COPLASTOTYPE *Tentaculites leclercqia* Clarke. N. Y. S. M. Bul. 107. 1907. p. 173; fig. p. 173.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 117, pl. 12 fig. 5.

Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

On slab with types of *Tentaculites leclercqia,* pl. 12, fig. 6, 7.

9436 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 173.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 12, fig. 7.

Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll. 1904

On slab with types of *Tentaculites leclercqia,* pl. 12, fig. 5, 6.

Tentaculites scalaris Schlotheim

9437 HYPOTYPE: HYPOPLASTOTYPE *Tentaculites scalaris* Schlotheim. Petrefaktenkunde. 1820. p. 377.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 98, pl. 22, fig. 9, 11.

Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9438 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 22, fig. 10.

Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

CEPHALOPODA

ACLEISTOCERAS Hyatt

Acleistoceras ? albani (Clarke)

9439 HOLOTYPE *Cyrtoceras albani* Clarke. N. Y. S. M. Bul. 107. 1907. p. 175; fig. p. 175.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 105, pl. 13, fig. 6.

St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll. 1900

9440 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 13, fig. 7.

St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll. 1900

Acleistoceras fischeri (Hall)

9441 HYPOTYPE *Gomphoceras (Apioceras) fischeri* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 13. 1860. p. 106.

Acleistoceras fischeri Flower. Bul. Amer. Pal. 1936. v. 22, no. 76, p. 62, pl. 8, fig. 8, 9, 10.

Cherry Valley ls. Manlius, N. Y.

ACTINOCERAS Bronn

Actinoceras crebriseptum (Hall)

9442 HYPOTYPE *Ormoceras crebriseptum* Hall. Pal. N. Y. 1847. 1:313.

Actinoceras crebriseptum Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 100, pl. 13, fig. 4.

Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.

9443 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 13, fig. 5.

Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.

9444 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 13, fig. 6.

Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.

9445 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 14, fig. 1.
Pulaski drift Near Trenton, N. Y.
R. Ruedemann, coll.

9446 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 14, fig. 2.
Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.

9447 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 14, fig. 3.
Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.

9448 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 14, fig. 4.
Pulaski beds Lorraine village, N. Y.
R. Ruedemann, coll.

Actinoceras ruedemanni Foerste & Teichert

9449 HYPOTYPE *Actinoceras ruedemanni* Foerste & Teichert. Denison Univ. Bul., Sci. Lab., Jour. 1930. 25: 250.
Teichert. Palaeontogr. 1933. v. 78, pt A, pl. 9, fig. 5.
Watertown ls. Watertown, N. Y.

9450 HYPOTYPE Teichert. Palaeontogr. 1933. v. 78, pt A, pl. 13, fig. 43.
Leray ls. Watertown, N. Y.

ADNATOCERAS Flower

Adnatoceras clarkei Flower

9451 HOLOTYPE *Adnatoceras clarkei* Flower. Palaeontogr. Amer. 1939. v. 2, no. 10, p. 127, pl. 7, fig. 2.
Parrish ls. Parrish gully, near Naples, N. Y.

Adnatoceras naplense Flower

9452 HOLOTYPE *Adnatoceras naplense* Flower. Palaeontogr. Amer. 1939. v. 2, no. 10, p. 126, pl. 3, fig. 2.
Cashaqua sh. Naples, N. Y.

AMPHICYRTOCERAS Foerste

Amphicyrtoceras sauridens (Clarke & Ruedemann)

9453 COTYPE *Poterioceras sauridens* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 14, fig. 6, 7, 8, 9.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

ANGLICORNUS Flower & Caster

Anglicornus goldringae Flower

9454 HOLOTYPE *Anglicornus goldringae* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 34, pl. 4, fig. 25.
Canadaway Belmont, Allegany co. N. Y.
A. Sherwood, coll. 1871

BRADFORDOCERAS Flower & Caster

Bradfordoceras (?) sp.

9455 MORPHOTYPE *Bradfordoceras (?)* sp. Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (F).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

9456 MORPHOTYPE Woodruff. N. Y. S. M. Bul. 326. 1942. fig. 8 (I).
Cuba beds Near Erie railroad station at Cuba, N. Y.
J. G. Woodruff, coll. & don. 1934

BREVICOCERAS **Flower**

Brevicoceras compactum Flower

9457 HOLOTYPE *Brevicoceras compactum* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 30, pl. 2, fig. 17-19.
Schoharie grit Schoharie, Schoharie co. N. Y.
Gebhard coll.

9458 PARATYPE Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, pl. 2, fig. 20-22.
Schoharie grit Schoharie, Schoharie co. N. Y.
Gebhard coll.

Brevicoceras concavum Flower

9459 HOLOTYPE *Brevicoceras concavum* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 29, pl. 1, fig. 15-16.
West River sh. (Naples stage) Genesee valley, N. Y.

Brevicoceras rotundum Flower

9460 HOLOTYPE *Brevicoceras rotundum* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 31, pl. 1, fig. 10-12.
Schoharie grit Schoharie, N. Y.
Gebhard coll.

CYCLOCERAS McCoy

"Cycloceras" persculptum Ruedemann

9461 HOLOTYPE *Cycloceras persculptum* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 92, pl. 13, fig. 1.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

CYCLORIZOCERAS Foerste

Cyclorizoceras cf. brevicorne (Hall)

9462 HYPOTYPE *Cyrtoceras* cf. *brevicorne* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 89, pl. 13, fig. 11.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

CYCLOSTOMICERAS Hyatt

Cyclostomiceras vasiforme (Dwight)

9463 HOLOTYPE *Oncoceras vasiforme* Dwight. Amer. Jour. Sci., 3d ser. 1884. 27:257, pl. 7, fig. 10, 10a.
Cyclostomiceras vasiforme Ulrich, Foerste & Miller. G. S. A., Spec. P. no. 49. 1943. p. 58, pl. 33, fig. 13.
Rochdale ls. Rochdale, N. Y.
W. B. Dwight, coll.

CYRTOCERAS Goldfuss

Cyrtoceras albani see Acleistoceras ? albani

Cyrtoceras arcticameratum see Galtoceras arcticameratum

Cyrtoceras arcticameratum see Galtoceras ruedemanni

"Cyrtoceras" bovinum Clarke & Ruedemann

9464 COTYPE *Cyrtoceras bovinum* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 90, pl. 16, fig. 8, 9.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

9465 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 18, fig. 5.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

9466 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 18, fig. 6.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

Cyrtoceras cf. **brevicorne** see **Cyclorizoceras** cf. **brevicorne**

Cyrtoceras ? **gibbosum** see **Micronoceras gibbosum**

Cyrtoceras orodes see **Euryrizoceras orodes**

DAWSONOCERAS Hyatt

Dawsonoceras americanum (Foord)

9467 HYPOTYPE *Dawsonoceras annulatum* var. *americanum* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 81, pl. 10, fig. 19, 20.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

9468 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 10, fig. 21.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

Dawsonoceras annulatum var. americanum see **Dawsonoceras americanum**

DOLORTHOCERAS Miller

Dolorthoceras elegans Flower

9469 HOLOTYPE *Dolorthoceras elegans* Flower. Palaeontogr. Amer. 1939. v. 2, no. 10, p. 105; p. 106, fig. 16; pl. 9, fig. 15, 16.
Parrish ls. Naples, N. Y.

ENDOCERAS Hall

Endoceras ? sp.

9470 HYPOTYPE *Endoceras ?* sp. Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 81; p. 86, fig. 21.
Utica sh. Steuben creek near Barneveld, N. Y.
R. Ruedemann, coll. 1915

Endoceras ? lorrainense Ruedemann

9471 HOLOTYPE *Endoceras ? lorrainense* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 81; p. 82, fig. 17.
Lorraine ss. Lorraine, N. Y.

9472 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 83, fig. 18.
Lorraine ss. Oswego co. N. Y.

Endoceras proteiforme var. **tenuistriatum** see **Geisonoceras tenuistriatum**

Endoceras proteiforme var. **tenuitextum** see **Geisonoceras tenuitextum**

Endoceras ? romanum Ruedemann

9473 HOLOTYPE *Endoceras ? romanum* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 84; p. 84, fig. 19.
Lorraine beds Near Rome, N. Y.
R. Ruedemann, coll.

ENDOLOBUS Meek & Worthen

Endolobus ? sp.

9474 ONOMATYPE *Endolobus ?* sp. Beede. N. Y. S. M. Bul. 149. 1911. p. 174.
Mississippian Cape le Trou, Grindstone isl., Magdalen isl.
J. M. Clarke, coll.

ENDOPLANOCERAS Flower

Endoplanoceras gomphus Flower

9475 HOLOTYPE *Endoplanoceras gomphus* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 54, pl. 3, fig. 16, 17.
Onondaga ls. One mile east of Babcock hill, Bridgewater, Oneida co. N. Y.
C. A. White, coll. 1860

EURYRIZOCERAS Foerste

Euryrizoceras orodes (Billings)

9476 HYPOTYPE *Cyrtoceras orodes* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 88, pl. 15, fig. 3.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

9477 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 15, fig. 6, 7, 8.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

9478 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 15, fig. 9.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

EXOCYRTOCERAS Flower

Exocyrtoceras constrictum Flower

9479 HOLOTYPE *Exocyrtoceras constrictum* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 40, pl. 2, fig. 3-5.
Schoharie grit Schoharie, N. Y.

Exocyrtoceras sinuatum Flower

9480 PARATYPE *Exocyrtoceras sinuatum* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 39, pl. 2, fig. 9-11.
Schoharie grit Schoharie, N. Y.

FOERSTEOCERAS Ruedemann

Foersteoceras turbinatum (Hall)

9481 HYPOTYPE *Foersteoceras turbinatum* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 65, pl. 19, fig. 1.
Cobleskill ls. Schoharie, N. Y.

9482 HYPOTYPE (of description) Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 65.
Cobleskill ls. Schoharie, N. Y.

GALTOCERAS Foerste

Galtoceras arcticameratum (Hall)

9483 HYPOTYPE *Cyrtoceras arcticameratum* Hall. Pal. N. Y. 1852. 2:349.
Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 87, pl. 15, fig. 1.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

9484 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 15, fig. 2.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

9485 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 16, fig. 6, 7.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

Galtoceras ruedemanni Foerste

9486 COTYPE *Cyrtoceras arcticameratum* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 87, pl. 16, fig. 1-4.
Galtoceras ruedemanni Foerste. Denison Univ. Bul., Sci. Lab., Jour. 1934. 29:170.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

9487 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 16, fig. 5.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

GEISONOCERAS Hyatt

Geisonoceras sp. nov.

9488 HYPOTYPE *Geisonoceras* sp. nov. Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 92, pl. 12, fig. 4.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Geisonoceras amplicameratum (Hall)

9489 HYPOTYPE *Orthoceras amplicameratum* Hall. Pal. N. Y. 1847. 1:205.
Geisonoceras amplicameratum Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 90, pl. 11, fig. 1.
Up. Utica sh. Holland Patent, N. Y.

9490 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 12, fig. 2.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

9491 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 12, fig. 3.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Geisonoceras cf. amplicameratum (Hall)

9492 HYPOTYPE *Orthoceras* cf. *amplicameratum* Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 8, fig. 11.
Canajoharie sh. Near Glens Falls, N. Y.

Geisonoceras teicherti Flower

9493 HOLOTYPE *Orthoceras* n. sp. Teichert. Palaeontogr. 1933. Bd 78, abt. A, p. 182, fig. 33; pl. 13, fig. 44, 46.
Geisonoceras teicherti Flower. Palaeontogr. Amer. 1939. v. 2, no. 10, p. 164, pl. 7, fig. 8; pl. 9, fig. 19.
Onondaga ls. Western New York

Geisonoceras tenuistriatum (Hall)

9494 HYPOTYPE *Endoceras proteiforme* Hall var. tenuistriatum Hall. Pal. N. Y. 1947. 1:209.
Orthoceras hudsonicum Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 8, fig. 7.
Schenectady beds Dettbarn quarry, near Schenectady, N. Y.
R. Ruedemann, coll.

9495 HYPOTYPE *Geisonoceras tenuistriatum* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 88, pl. 10, fig. 12.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

9496 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 10, fig. 13.
Canajoharie sh. Schoharie creek near Fort Hunter, N. Y.

9497 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 10, fig. 14.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

9498 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 11, fig. 2.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Geisonoceras tenuistriatum (Hall) mut. **frankfortense** Ruedemann

9499 HOLOTYPE *Geisonoceras tenuistriatum* mut. *frankfortense* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 89, pl. 12, fig. 1.
Frankfort sh. Delta dam, near Rome, N. Y.
R. Ruedemann, coll.

Geisonoceras tenuitextum (Hall)

9500 HYPOTYPE *Endoceras proteiforme* Hall var. *tenuitextum* Hall. Pal. N. Y. 1847. 1:210.
Geisonoceras tenuitextum Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 81; p. 82, fig. 21.
Trenton ls. Watertown, N. Y.
R. Ruedemann, coll.

9501 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 82, fig. 22.
Trenton ls. Watertown, N. Y.
R. Ruedemann, coll.

9502 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 82, fig. 23.
Trenton ls. Middleville, N. Y.
R. Ruedemann, coll.

9503 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 82, fig. 24.
Trenton ls. Middleville, N. Y.
R. Ruedemann, coll.

GOMPHOCERAS Sowerby

Gomphoceras (Apioceras) fischeri see **Acleistoceras fischeri**

Gomphoceras osculum Ruedemann

9504 COTYPE *Gomphoceras osculum* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 76, pl. 27, fig. 10, 11.
Cobleskill ls. Morganville, N. Y.

9505 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 27, fig. 10.
Cobleskill ls. Morganville, N. Y.

9506 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 27, fig. 10.
Cobleskill ls. Morganville, N. Y.

Gomphoceras ruedemanni Foerste

9555 HOLOTYPE (original & counterpart) *Phragmoceras accola* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 77, pl. 26, fig. 3.
Gomphoceras ruedemanni Foerste. Denison Univ. Bul., Sci. Lab., Jour. 1929. 24:365, pl. 45, fig. 2.
Bertie wl.
Crane's Corners, Litchfield, Herkimer co. N. Y.

Gomphoceras solidum see **Poteriocerina solidum**

GONIOCERAS Hall

Gonioceras anceps Hall

9507 HYPOTYPE *Gonioceras anceps* Hall. Pal. N. Y. 1847. 1:54.
Teichert. Palaeontogr. 1933. v. 78, pt A, pl. 10, fig. 8.
Watertown ls. Watertown, N. Y.

HEXAMEROCERAS Hyatt

Hexameroceras sp.

9581 HYPOTYPE *Septameroceras (?)* sp. Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 81, pl. 27, fig. 1.
Pittsford sh. Pittsford, N. Y.

Hexameroceras chadwicki Ruedemann

9508 COTYPE *Hexameroceras chadwicki* Ruedemann. N. Y. S. M. Bul. 219-220. 1920. p. 207, pl. 3, fig. 7, 8.
Vernon sh. Pittsford, N. Y.
R. Ruedemann and C. Hartnagel, coll. 1918

9509 COTYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 9.
Vernon sh. Pittsford, N. Y.
R. Ruedemann and C. Hartnagel, coll. 1918

Hexameroceras microstoma Ruedemann

9510 HOLOTYPE *Hexameroceras microstoma* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 79, pl. 27, fig. 7, 8, 9.
Foerste. Denison Univ. Bul., Sci. Lab., Jour. 1929. 24: 376, pl. 49, fig. 6.
Guelph dol. Niagara Falls, Ontario, Can.

9511 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 27, fig. 2.
Guelph dol. Niagara Falls, Ontario, Can.

9512 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 27, fig. 3.
Guelph dol. Niagara Falls, Ontario, Can.

9513 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 27, fig. 4.
Guelph dol. Niagara Falls, Ontario, Can.

9514 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 27, fig. 5, 6.
Guelph dol. Niagara Falls, Ontario, Can.

KIONOCERAS Hyatt

Kionoceras champlaini Clarke

9515 HOLOTYPE *Kionoceras champlaini* Clarke. N. Y. S. M. Bul. 107. 1907. p. 177; fig. p. 177.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 142, pl. 13, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Kionoceras darwini (Billings)

9516 HYPOTYPE *Kionoceras darwini* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 84, pl. 10, fig. 22.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9517 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 12, fig. 1, 2.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9518 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 12, fig. 4.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Kionoceras rhysum see Spyroceras rhysum

LECHRITROCHOCERAS Foerste

Lechritrochoceras desplainense (McChesney)

9588 HYPOTYPE *Trochoceras desplainense* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 100, pl. 20, fig. 5.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9589 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 20, fig. 7.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9590 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 20, fig. 9.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

METAPHRAGMOCERAS Flower

Metaphragmoceras dubium Flower

9519 HOLOTYPE *Metaphragmoceras dubium* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 67; p. 66, fig. 7, 8; pl. 4, fig. 21.
Onondaga ls. Le Roy, Genesee co. N. Y.

On slab with type of *Metaphragmoceras triangulatum,* p. 66, fig. 9, 10; pl. 4, fig. 11.

Metaphragmoceras triangulatum Flower

9520 HOLOTYPE *Metaphragmoceras triangulatum* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 65; p. 66, fig. 9, 10; pl. 4, fig. 11.
Onondaga ls. Le Roy, Genesee co. N. Y.

On slab with type of *Metaphragmoceras dubium,* p. 66, fig. 7, 8; pl. 4, fig. 21.

METARMENOCERAS Flower

Metarmenoceras bilaterale Flower

9521 HOLOTYPE *Orthoceras* cf. *longicameratum* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 21, pl. 1, fig. 9.

Metarmenoceras bilaterale Flower. Jour. Pal. 1940. v. 14, no. 5, p. 445, pl. 61, fig. 3, 4.

Dalhousie beds Stewart's cove, Dalhousie, N. B.

J. M. Clarke, coll. 1900

MICHELINOCERAS Foerste

Michelinoceras hartnageli Flower

9522 HOLOTYPE *Michelinoceras hartnaglei* Flower. Jour. Pal. 1943. v. 17, no. 3, p. 251, pl. 40, fig. 15.

Loose boulder from Stonehouse formation

Near Arisaig, Nova Scotia

C. A. Hartnagel, coll.

MICRONOCERAS Flower

Micronoceras gibbosum (Hall)

9523 HYPOTYPE *Cyrtoceras ? gibbosum* Hall. Illus. Dev. Foss., N. Y. G. S., Pal. 1877. Cephalopoda. Explanation pl. 47.

Micronoceras gibbosum Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 48, pl. 1, fig. 13-14.

Cherry Valley ls. Onondaga co. N. Y.

James Hall, coll.

MITROCERAS Hyatt

Mitroceras ? cf. anderdonense (Grabau)

9524 HYPOTYPE *Trochoceras anderdonense* Grabau. Mich. Geol. and Biol. Surv., Geol. Ser. 1. 1910. 2:200.

Trochoceras ? cf. *anderdonense* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 57, pl. 17, fig. 2.

Bertie wl. Buffalo, N. Y.

E. Reinhard, coll.

MOOREOCERAS Miller, Dunbar & Condra

Mooreoceras bradfordoides Flower

9525 HOLOTYPE *Mooreoceras bradfordoides* Flower. Palaeontogr. Amer. 1939. v. 2, no. 10, p. 147; p. 148, fig. 19; pl. 7, fig. 7.

Wellsburg monothem Austinville, Bradford co. Pa.

A. Sherwood, coll. 1873

Mooreoceras ruedemanni Flower

9526 HOLOTYPE *Mooreoceras ruedemanni* Flower. Palaeontogr. Amer. 1939. v. 2, no. 10, p. 149; p. 150, fig. 20; pl. 1, fig. 4; pl. 7, fig. 3; pl. 8, fig. 8.
Wellsburg monothem Austinville, Bradford co. Pa.

ONCOCERAS Hall

Oncoceras (?) sp.

9527 HYPOTYPE (original & counterpart) *Oncoceras (?)* sp. Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 115, pl. 8, fig. 12.
Snake Hill beds Signal works, near Albany, N. Y.
R. Ruedemann, coll.

Oncoceras pupaeforme Ruedemann

9528 HOLOTYPE *Oncoceras pupaeforme* Ruedemann. N. Y. S. M. Bul. 227-28. 1921. p. 69, fig. 5 (illustrations only).
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 104, pl. 19, fig. 3.
Utica sh. Holland Patent, N. Y.
Rust purchase

9529 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 19, fig. 1.
Utica sh. Holland Patent, N. Y.
Rust purchase

9530 PARATYPE Ruedemann. N. Y. S. M. Bul. 227-28. 1921. p. 69, fig. 6.
Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 19, fig. 2.
Utica sh. Holland Patent, N. Y.
Rust purchase

9531 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 19, fig. 4.
Utica sh. Holland Patent, N. Y.
Rust purchase

9532 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 19, fig. 5.
Utica sh. Holland Patent, N. Y.
Rust purchase

9533 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 19, fig. 6.
Utica sh. Holland Patent, N. Y.
Rust purchase

9534 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 19, fig. 7.
Utica sh. Holland Patent, N. Y.
Rust purchase

9535 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 19, fig. 8.
Utica sh. Holland Patent, N. Y.
Rust purchase

Oncoceras vasiforme see **Cyclostomiceras vasiforme**

ORMOCERAS Stokes

Ormoceras sp.

9536 HYPOTYPE *Orthoceras* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 22, fig. 16.
Ormoceras sp. Teichert. Palaeontogr. 1933. Bd 78, abt. A, p. 177, fig. 32.
Chapman ss. Presque Isle stream, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Ormoceras crebriseptum see **Actinoceras crebriseptum**

ORTHOCERAS Breynius

Orthoceras n.sp. see **Geisonoceras teicherti**

Orthoceras sp. see **Ormoceras** sp.

"Orthoceras" sp.

9537 HYPOTYPE *Orthoceras* sp. Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 55, pl. 16, fig. 3.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Orthoceras amplicameratum see **Geisonoceras amplicameratum**

Orthoceras cf. **amplicameratum** see **Geisonoceras** cf. **amplicameratum**

Orthoceras (Dawsonoceras) annulatum var. **americanum** see **Dawsonoceras americanum**

"Orthoceras" arcuolineatum Ruedemann

9538 HOLOTYPE *Orthoceras arcuolineatum* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 112, pl. 8, fig. 1, 2.
Canajoharie sh. Fort Edward, Saratoga co. N. Y.
R. Ruedemann, coll.

Orthoceras bilineatum see **Spyroceras bilineatum**

Orthoceras (Kionoceras) darwini see **Kionoceras darwini**

"Orthoceras" hudsonicum Ruedemann

9539 HOLOTYPE *Orthoceras hudsonicum* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 112, pl. 8, fig. 8.
Canajoharie beds Alplaus, N. Y.
R. Ruedemann, coll.

9540 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 8, fig. 3.
Canajoharie beds Watervliet, N. Y.
R. Ruedemann, coll.

9541 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 8, fig. 5.
Canajoharie beds Alplaus, N. Y.
R. Ruedemann, coll.

9542 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 8, fig. 6.
Canajoharie beds Alplaus, N. Y.
R. Ruedemann, coll.

9543 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 8, fig. 9.
Canajoharie beds Alplaus, N. Y.
R. Ruedemann, coll.

9544 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 8, fig. 10.
Canajoharie beds Alplaus, N. Y.
R. Ruedemann, coll.

Orthoceras hudsonicum see Geisonoceras tenuistriatum

Orthoceras lamellosum see Paractinoceras lamellosum

Orthoceras cf. longicameratum see Metarmenoceras bilaterale

Orthoceras norumbegae see Protokionoceras norumbegae

Orthoceras trusitum see Protokionoceras trusitum

OVOCERAS Flower

Ovoceras constrictum Flower

9545 PARATYPE *Ovoceras constrictum* Flower. Bul. Amer. Pal. 1936. v. 22, no. 76, p. 66, pl. 8, fig. 11.
Cherry Valley ls. Manlius, N. Y.

Ovoceras (?) gibbosum see Micronoceras gibbosum

OXYGONIOCERAS Foerste

Oxygonioceras novascotium Flower

9546 HOLOTYPE *Oxygonioceras novascotium* Flower. Jour. Pal. 1943. v. 17, no. 3, p. 254, pl. 40, fig. 12-14.
Loose boulder from Stonehouse formation
Near Arisaig, Nova Scotia
C. A. Hartnagel, coll.

PARACTINOCERAS Hyatt

Paractinoceras lamellosum (Hall)

9547 HYPOTYPE *Orthoceras lamellosum* Hall. Pal. N. Y. 1847. 1: 312.
Paractinoceras lamellosum Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 102; p. 101, fig. 24.
Pulaski beds Locality ?
R. Ruedemann, coll.

9548 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 14, fig. 6.
Pulaski drift Near Trenton, N. Y.
Rust purchase
On slab with type of *Atactopora hirsuta,* Bul. 262, pl. 10, fig. 5.

PARAPHRAGMITES Flower

Paraphragmites ascoceroides Flower

9549 HOLOTYPE *Paraphragmites ascoceroides* Flower. Jour. Pal. 1943. v. 17, no. 3, p. 255, pl. 40, fig. 1-3.
Loose boulder from Stonehouse formation
Near Arisaig, Nova Scotia
C. A. Hartnagel, coll.

9550 PARATYPE Flower. Jour. Pal. 1943. v. 17, no. 3, pl. 40, fig. 11.
Loose boulder from Stonehouse formation
Near Arisaig, Nova Scotia
C. A. Hartnagel, coll.

Paraphragmites gomphoceroides Flower

9551 HOLOTYPE *Paraphragmites gomphoceroides* Flower. Jour. Pal. 1943. v. 17, no. 3, p. 256, pl. 40, fig. 4, 5.
Loose boulder from Stonehouse formation
Near Arisaig, Nova Scotia
C. A. Hartnagel, coll.

9552 PARATYPE Flower. Jour. Pal. 1943. v. 17, no. 3, pl. 40, fig. 7-10.
Loose boulder from Stonehouse formation
Near Arisaig, Nova Scotia
C. A. Hartnagel, coll.

PHRAGMOCERAS Broderip

Phragmoceras accola Ruedemann

9553 HOLOTYPE *Phragmoceras accola* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 77, pl. 26, fig. 1.
Foerste. Denison Univ. Bul., Sci. Lab., Jour. 1929. 24: 329, pl. 62, fig. 1.
Bertie wl. Crane's Corners, Litchfield, Herkimer co. N. Y.

9554 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 26, fig. 2.
Bertie wl. Crane's Corners, Litchfield, N. Y.

9556 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 26, fig. 4.
Bertie wl. Crane's Corners, Litchfield, N. Y.

9557 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 26, fig. 5.
Bertie wl. Crane's Corners, Litchfield, N. Y.

Phragmoceras accola see **Gomphoceras ruedemanni**

Phragmoceras parvum see **Phragmoceras ruedemanni**

Phragmoceras ruedemanni Foerste

9558 COTYPE *Phragmoceras parvum* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 99, pl. 21, fig. 1.
Phragmoceras ruedemanni Foerste. Denison Univ. Bul., Sci. Lab., Jour. 1929. 24:355.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9559 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 21, fig. 2, 3.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9560 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 21, fig. 4, 5, 6, 7, 8.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Poterioceras sauridens see **Amphicyrtoceras sauridens**

POTERIOCERINA Foerste

Poteriocerina solida (Hall)

9561 HYPOTYPE *Poteriocerina solidum* Flower. Bul. Amer. Pal. 1936. v. 22, no. 76, p. 70, pl. 9, fig. 8, 9, 10.
Cherry Valley ls. Manlius, N. Y.

PRISTEROCERAS Ruedemann

Pristeroceras timidum Ruedemann

9562 COTYPE *Pristeroceras timidum* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 57; p. 58, fig. 36.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

9563 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 58, fig. 37.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

9564 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 18, fig. 1.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

9565 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 18, fig. 2.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

9566 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 18, fig. 3.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

9567 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 18, fig. 4.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

9568 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 18, fig. 5.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

9569 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 18, fig. 6.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

9570 COTYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 18, fig. 7.
Bertie wl. Buffalo, N. Y.
E. Reinhard, coll.

PROTOKIONOCERAS Grabau & Shimer

Protokionoceras norumbegae (Clarke)

9571 HOLOPLASTOTYPE *Orthoceras norumbegae* Clarke. N. Y. S. M. Bul. 107. 1907. p. 177; figures p. 178.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 97, pl. 22, fig. 14, 15.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Protokionoceras trusitum (Clarke & Ruedemann)

9572 COTYPE *Orthoceras trusitum* Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 10, fig. 25.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9573 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 10, fig. 26.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9574 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 13, fig. 2.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9575 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 13, fig. 3.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9576 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 13, fig. 4.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9577 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 13, fig. 5.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9578 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 13, fig. 7.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9579 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 13, fig. 9.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

PSEUDORTHOCERAS Girty

Pseudorthoceras anomalum Flower

9580 HOLOTYPE *Pseudorthoceras anomalum* Flower. Palaeontogr. Amer. 1939. v. 2, no. 10, p. 143; p. 145, fig. 18; pl. 4, fig. 9.
Parrish ls. Parrish gully, Naples, N. Y.

Septameroceras (?) sp. see **Hexameroceras** sp.

SPYROCERAS Hyatt

Spyroceras bilineatum (Hall)

9582 HYPOTYPE *Orthoceras bilineatum* Hall. Pal. N. Y. 1847. 1 :35.
Spyroceras bilineatum Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 92, pl. 13, fig. 2, 3.
Up. Utica sh. Holland Patent, N. Y.
Haskell purchase

Spyroceras rhysum (Clarke)

9583 COTYPE *Kionoceras rhysum* Clarke. N. Y. S. M. Bul. 107. 1907. p. 176; fig. p. 176.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 142, pl. 13, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9584 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 176.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 13, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900
On slab with types of *Spirorbis latissimus,* pt 1, pl. 11, fig. 3, 4.

9585 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 13, fig. 1.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9586 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 13, fig. 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

9587 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 13, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Trochoceras ? cf. anderdonense see **Mitroceras ? cf. anderdonense**

Trochoceras desplainense see **Lechritrochoceras desplainense**

Trochoceras turbinatum see **Foersteoceras turbinatum**

TROCHOLITES Conrad

Trocholites ammonius Conrad

9591 HYPOTYPE *Trocholites ammonius* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 94, pl. 17, fig. 4.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Trocholites ammonius Conrad var. **angustiumbilicatus** Ruedemann

9592 COTYPE *Trocholites ammonius* var. *angustiumbilicatus* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 97, pl. 17, fig. 5.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

9593 COTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 18, fig. 3.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Trocholites ammonius Conrad var. **major** Ruedemann

9594 COTYPE *Trocholites ammonius* var. *major* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 97, pl. 17, fig. 1.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

On slab with types of *Carcinosoma breviceps,* pl. 26, fig. 2; *Dolichopterus insolitus,* pl. 26, fig. 1.

9595 COTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 17, fig. 2.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

9596 COTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 17, fig. 3.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

9597 COTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 18, fig. 1, 1a, 1b.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

Trocholites planorbiformis Conrad

9598 HYPOTYPE *Trocholites planorbiformis* Conrad. Phila. Acad. Nat. Sci., Jour. 1842. 8:274.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 98, pl. 16, fig. 8.
Pulaski drift Oneida co. N. Y.
R. Ruedemann, coll.

9599 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 18, fig. 4.
Pulaski beds Pulaski, N. Y.
R. Ruedemann, coll.

9600 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 18, fig. 5.
Pulaski beds Turin, N. Y.
R. Ruedemann, coll.

TURNOCERAS Foerste

Turnoceras n. sp.

9601 HYPOTYPE *Turnoceras* n. sp. Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 43, pl. 4, fig. 20.
Schoharie grit Schoharie, N. Y.

VAGINOCERAS Hyatt

Vaginoceras cf. **longissimum** (Hall)

9602 HYPOTYPE *Vaginoceras* cf. *longissimum* Flower. Palaeontogr. Amer. 1941. v. 3, no. 13, p. 41, pl. 3, fig. 7.
Black River ls. Watertown, N. Y.

VERTICOCERAS Flower

Verticoceras sp.

9603 HYPOTYPE *Verticoceras* sp. Flower. Bul. Amer. Pal. 1936. v. 22, no. 76, p. 73, pl. 6, fig. 6.
Cherry Valley ls. Schoharie, N. Y.

Verticoceras erectum Flower

9604 HOLOTYPE *Verticoceras erectum* Flower. Bul. Amer. Pal. 1936. v. 22, no. 76, p. 72, pl. 9, fig. 6, 7.
Cherry Valley ls. Schoharie, N. Y.

WISSENBACHIA Foerste

Wissenbachia gebhardi Flower

9605 HOLOTYPE *Wissenbachia gebhardi* Flower. Palaeontogr. Amer. 1938. v. 2, no. 9, p. 57, pl. 1, fig. 4; pl. 4, fig. 2.
Schoharie grit Schoharie, N. Y.
Gebhard coll.

CEPHALOPOD (Undescribed)

9606 HYPOTYPE Teichert. Palaeontogr. 1933. Bd 78, abt. A, p. 211, fig. 49; pl. 13, fig. 45.
Canajoharie sh. Schoharie creek, Florida, N. Y.

CRUSTACEA

Anatifopsis wardelli see (under Pisces) **Cyathaspis wardelli**

ANOMALOCARIS Whiteaves

"Anomalocaris" (?) kokomoensis Ruedemann

9627 HOLOTYPE *Anomalocaris (?) kokomoensis* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 75, pl. 23, fig. 6.
Kokomo wl. Kokomo, Ind.
Hammell collection

APARCHITES Jones

Aparchites minutissimus (Hall)

9628 HYPOTYPE: HYPOPLASTOTYPE *Leperditia (Isochilina) minutissima* Hall. N. Y. S. M., Ann. Rep't 24. 1872. p. 231 (Advance sheets, 1871. p. 7).
Aparchites minutissimus Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 138, pl. 23, fig. 1.
Whetstone Gulf sh.
Station 6 of the Lorraine gulf section, N. Y.
R. Ruedemann, coll.

9629 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 2.
Whetstone Gulf sh.
Station 10 of Wood creek section, N. Y.
R. Ruedemann, coll.
On slab with type of *Homotelus stegops,* pl. 22, fig. 4.

APUS Schaeffer

Apus beedei Ruedemann

9630 HOLOTYPE *Apus beedei* Ruedemann. Jour. Geol. 1922. v. 30, no. 4, p. 311; p. 312, fig. 1, 2.
Enid formation Elkeno, Okla.
Dr Thomas T. Jackson, coll.
Prof J. W. Beede, don.

Beyrichia chambersi see **Ceratopsis chambersi** var.

Beyrichia oculifer see **Ceratopsis oculifera**

BOLLIA Jones & Holl

Bollia pulchra Ruedemann

9637 HOLOTYPE *Bollia pulchra* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 141, pl. 23, fig. 9.
Whetstone Gulf sh.
Chimney point, near Martinsburgh, N. Y.
R. Ruedemann, coll.

9638 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 10.
Frankfort sh. Near Rome, N. Y.
Rust purchase

9639 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23. fig. 11.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

9640 PARATYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 12.
Whetstone Gulf sh.
Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

Bollia uticana Ruedemann

9641 HOLOTYPE: HOLOPLASTOTYPE *Bollia uticana* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 140, pl. 23, fig. 8
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

CARYOCARIS Salter

Caryocaris curvilata Gurley

9656 HYPOTYPE *Caryocaris curvilatus* Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 95; p. 96, fig. 45.
Beekmantown (age) sh. Alaska-Yukon boundary
L. D. Burling, don.

9657 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 96, fig. 46.
Beekmantown (age) sh. Alaska-Yukon boundary
L. D. Burling, don.

9658 HYPOTYPE (original & counterpart) Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 96, fig. 47.
Beekmantown (age) sh. Alaska-Yukon boundary
L. D. Burling, don.

9659 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 96, fig. 48.
Beekmantown (age) sh. Alaska-Yukon boundary
L. D. Burling, don.

9660 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 96, fig. 49.
Beekmantown (age) sh. Alaska-Yukon boundary
L. D. Burling, don.

9661 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 96, fig. 50.
Beekmantown (age) sh. Alaska-Yukon boundary
L. D. Burling, don.

9662 HYPOTYPE *Caryocaris curvilata* Ruedemann. G. S. A., Mem. 2. 1934. p. 92, pl. 22, fig. 1.
Deepkill sh. Snyder's lake, six miles east of Albany, N. Y.
R. Ruedemann, coll.

9663 HYPOTYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 22, fig. 2.
Deepkill sh. Snyder's lake, six miles east of Albany, N. Y.
R. Ruedemann, coll.

9664 HYPOTYPE (original & counterpart) Ruedemann. G. S. A., Mem. 2. 1934. pl. 22, fig. 6.
Deepkill sh. Snyder's lake, six miles east of Albany, N. Y.
R. Ruedemann, coll.
On slab with type of *Caryocaris curvilata,* pl. 22, fig. 7.

9665 HYPOTYPE (original & counterpart) Ruedemann. G. S. A., Mem. 2. 1934. pl. 22, fig. 7.
Deepkill sh. Snyder's lake, six miles east of Albany, N. Y.
R. Ruedemann, coll.
On slab with type of *Caryocaris curvilata,* pl. 22, fig. 6.

Caryocaris raymondi Ruedemann

9666 COTYPE *Caryocaris raymondi* Ruedemann. G. S. A., Mem. 2. 1934. p. 92, pl. 8, fig. 8.
Athens sh. Near Calera, Ala.
R. S. Poor, coll. & don. 1932

9667 COTYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 8, fig. 9.
Athens sh. Near Calera, Ala.
R. S. Poor, coll. & don. 1932

9668 COTYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 8, fig. 10, 12.
Athens sh. Near Calera, Ala.
R. S. Poor, coll. & don. 1932

9669 COTYPE Ruedemann. G. S. A., Mem. 2. 1934. pl. 8, fig. 11, 12.
Athens sh. Near Calera, Ala.
R. S. Poor, coll. & don. 1932

CERATIOCARIS McCoy

Ceratiocaris sp. ?

9670 HYPOTYPE *Ceratiocaris* sp. ? Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 148, pl. 26, fig. 6.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

Ceratiocaris acuminata Hall

9671 HYPOTYPE *Ceratiocaris acuminatus* Hall. Pal. N. Y. 1859. 3:422.
Ceratiocaris acuminata Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 71, pl. 23, fig. 1.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

Ceratiocaris (Limnocaris) clarkei Ruedemann

9672 HOLOTYPE *Ceratiocaris (Limnocaris) clarkei* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 73, pl. 23, fig. 2.
Bertie wl. (drift) Canandaigua, N. Y.
J. M. Clarke, coll.

9673 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 23, fig. 3.
Bertie wl. (drift) Canandaigua, N. Y.
J. M. Clarke, coll.

9674 PARATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. pl. 23. fig. 4.
Bertie wl. (drift) Canandaigua, N. Y.
J. M. Clarke, coll.

Ceratiocaris (Limnocaris) praecedens Clarke

9675 ONOMATYPE *Ceratiocaris (Limnocaris) praecedens* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 73.
Pittsford sh. "Spring house," Pittsford, N. Y.
R. Ruedemann & H. C. Wardell, coll. 1906

Ceratiocaris (Limnocaris) salina Ruedemann

9676 COTYPE *Ceratiocaris (Limnocaris) salina* Ruedemann. N. Y S. M. Bul. 189. 1916. p. 92, pl. 33, fig. 1.
Pittsford sh. Pittsford, N. Y.
G. H. Chadwick, coll. 1915

On slab with type of *Ceratiocaris (Limnocaris) salina,* pl. 33, fig. 2.

9677 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 33, fig. 2.
Pittsford sh. Pittsford, N. Y.
G. H. Chadwick, coll. 1915

On slab with type of *Ceratiocaris (Limnocaris) salina,* pl. 33, fig. 1.

9678 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 33, fig. 3.
Pittsford sh. Pittsford, N. Y.
Mrs C. S. Phelps, coll. 1915

9679 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 33, fig. 4.
Pittsford sh. Pittsford, N. Y.
Mrs C. S. Phelps, coll. 1915

9680 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 33, fig. 5.
Pittsford sh. Pittsford, N. Y.
G. H. Chadwick, coll. 1915

CERATOPSIS Ulrich

Ceratopsis chambersi (Miller) var.

9684 HYPOTYPE *Beyrichia chambersi* Miller. Cin. Quart. Jour. Sci. 1874. 1:234.
Ceratopsis chambersi var. Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 121, pl. 9, fig. 15.
Indian Ladder beds Indian Ladder, Albany co. N. Y.
R. Ruedemann. coll.

Ceratopsis oculifera (Hall)

9685 HYPOTYPE *Beyrichia oculifera* Hall. N. Y. S. M., Ann. Rep't 24. 1872. p. 232. (advance sheets, 1871, p. 8).
Ceratopsis oculifera Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 143, pl. 23, fig. 17.
Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.

9686 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 18.
Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.
On slab with type of *Ceratopsis oculifera,* pl. 23, fig. 19.

9687 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 19.
Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.
On slab with type of *Ceratopsis oculifera,* pl. 23, fig. 18.

9688 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 20.
Pulaski beds Near Pulaski, N. Y.
R. Ruedemann, coll.

DICRANELLA Ulrich

Dicranella bivertex (Ulrich)

9903 HYPOTYPE *Leperditia bivertex* Ulrich. Cin. Soc. N. H., Jour. 1879. 2:11.

Ulrichia ? bivertex Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 120, pl. 9, fig. 11.

Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

9904 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 12.

Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

On slab with type of *Primitiella unicornis* var., pl. 9, fig. 13.

ELPE Barrande

Elpe radiata (Ulrich)

9731 HYPOTYPE (original & counterpart) *Leperditia radiata* Ulrich. Cin. Soc. N. H., Jour. 1879. 2:9.

Elpe radiata Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 144, pl. 23, fig. 16.

Deer River sh.
Allendale bridge at mouth of Lorraine gulf. N. Y.
R. Ruedemann, coll.

EMMELEZOE Jones & Woodward

Emmelezoe minuta Ruedemann

9732 HOLOTYPE *Emmelezoe minuta* Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 74, pl. 24, fig. 4.

Bertie wl. North Buffalo, N. Y.
E. Reinhard coll.

EOBALANUS Ruedemann

Eobalanus informans Ruedemann

9733 HOLOTYPE *Eobalanus informans* Ruedemann. N. Y. S. M. Bul. 251. 1924. p. 94, pl. 1, fig. 2; pl. 2, fig. 1.

Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 146, pl. 24, fig. 2, 3.

Up. Utica sh. Holland Patent, N. Y.
R. Ruedemann, coll.

On slab with type of *Eobalanus informans,* Bul. 251, pl. 1, fig. 2, pl. 2, fig. 2; Bul. 272, pl. 24, fig. 2, 4.

9734 PARATYPE Ruedemann. N. Y. S. M. Bul. 251. 1924. pl. 1, fig. 2; pl. 2, fig. 2.
Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 24, fig. 2, 4.
Up. Utica sh. Holland Patent, N. Y.
R. Ruedemann, coll.

On slab with type of *Eobalanus informans,* Bul. 251, pl. 1, fig. 2, pl. 2, fig. 1; Bul. 272, pl. 24, fig. 2, 3.

Eobalanus trentonensis Ruedemann

9735 HOLOTYPE *Eobalanus trentonensis* Ruedemann. N. Y. S. M. Bul. 251. 1924. p. 94, pl. 1, fig. 3; pl. 2, fig. 3.
Trenton ls. Trenton Falls, N. Y.
Rust collection

EURYCHILINA Ulrich

Eurychilina subradiata Ulrich

9737 HYPOTYPE *Eurychilina subradiata* Ulrich. Cin. Soc. N. H., Jour. 1890. 13, pt 1, p. 126.
Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 121, pl. 9, fig. 16.
Canajoharie sh. Canajoharie, Montgomery co. N. Y.
R. Ruedemann, coll.

GAMPSONYX Jordan

Gampsonyx brasilicus Clarke

9738 COTYPE *Gampsonyx brasilicus* Clarke. N. Y. S. M. Bul. 219-220. 1920. p. 137, pl. 3, fig. 9.
Permian Guarehy, São Paulo, Brazil
G. Florence, coll.

9739 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 10.
Permian Guarehy, São Paulo, Brazil
G. Florence, coll.

JONESELLA Ulrich

Jonesella pedigera Ulrich

9770 HYPOTYPE *Jonesella pedigera* Ulrich. Cin. Soc. N. H., Jour. 1890. 13:122.

Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 140, pl. 23, fig. 13.

Whetstone Gulf sh.

Station 6 of Lorraine gulf section, N. Y.

R. Ruedemann, coll.

On slab with types of *Rafinesquina alternata* mut. *centristriata,* pl. 12, fig. 14; *Hyolithes pumilus,* pl. 10, fig. 6; *Jonesella pedigera,* pl. 23, fig. 14, 15.

9771 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 14.

Whetstone Gulf sh.

Station 6 of Lorraine gulf section, N. Y.

R. Ruedemann, coll.

On slab with types of *Rafinesquina alternata* mut. *centristriata,* pl. 12, fig. 14; *Hyolithes pumilus,* pl. 10, fig. 6; *Jonesella pedigera,* pl. 23, fig. 13, 15.

9772 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 15.

Whetstone Gulf sh.

Station 6 of Lorraine gulf section, N. Y.

R. Ruedemann, coll.

On slab with types of *Rafinesquina alternata* mut. *centristriata,* pl. 12, fig. 14; *Hyolithes pumilus,* pl. 10, fig. 6; *Jonesella pedigera,* pl. 23, fig. 13, 14.

LACCOPRIMITIA Ulrich & Bassler

Laccoprimitia centralis (Ulrich)

9841 HYPOTYPE *Primitia centralis* Ulrich. Cin. Soc. N. H., Jour. 1890. 13:130.

Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 138, pl. 23, fig. 7.

Whetstone Gulf sh.

Station 4 of Lorraine gulf section, N. Y.

R Ruedemann, coll.

LEPERDITIA Rouault

Leperditia balthica Hisinger var. **guelphica** Jones

9775 HYPOTYPE *Leperditia balthica* var. *guelphica* Jones. Can. G. S., Contr. Micro-Pal. 1891. 3:80.
Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 106, pl. 21, fig. 9.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

9776 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. pl. 21, fig. 10, 11.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Leperditia bivertex see **Ulrichia ? bivertex**

Leperditia (Isochilina) minutissima see **Aparchites minutissimus**

Leperditia radiata see **Elpe radiata**

Leperditia unicornis see **Primitiella unicornis**

PAULOCARIS Clarke

Paulocaris pachecoi Clarke

9807 COTYPE *Paulocaris pachecoi* Clarke. N. Y. S. M. Bul. 219-220. 1920. p. 135, pl. 2, fig. 1, 2, 3.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9808 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 4.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9809 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 5.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9810 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 6.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9811 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 7.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9812 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 8.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9813 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 9.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9814 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 10.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9815 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 11.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9816 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 12.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9817 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 1.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9818 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 2.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9819 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 3.
Permian Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9820 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 4.
Permian
Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9821 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 5.
Permian
Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9822 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 6.
Permian
Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9823 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 7.
Permian
Guarehy, São Paulo, Brazil
J. Pacheco, coll.

9824 COTYPE Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 8.
Permian
Guarehy, São Paulo, Brazil
J. Pacheco, coll.

PRIMITIA Jones & Holl

Primitia centralis see Laccoprimitia centralis

Primitia rudis Ulrich

9842 HYPOTYPE *Primitia rudis* Ulrich. Cin. Soc. N. H., Jour. 1890. 13:136.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 139, pl. 23, fig. 3.
Whetstone Gulf sh.
Station 9 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

9843 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 23, fig. 4.
Whetstone Gulf sh.
Station 7 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

9844 HYPOTYPE Ruedemann. N. Y. S. M. Bul. *272*. 1926. pl. 23, fig. 5.
Whetstone Gulf sh.
Station 4 of Lorraine gulf section, N. Y.
R. Ruedemann, coll.

PRIMITIELLA Ulrich

Primitiella unicornis (Ulrich)

9845 HYPOTYPE *Leperditia unicornis* Ulrich. Cin. Soc. N. H., Jour. 1879. 2:10.
Primitiella unicornis Ruedemann. N. Y. S. M. Bul. *272*. 1926. p. 137, pl. 23, fig. 6.
Whetstone Gulf sh.
Station 6 of Whetstone gulf section, N. Y.
R. Ruedemann, coll.

Primitiella unicornis (Ulrich) var.

9846 HYPOTYPE *Primitiella unicornis* var. Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 121, pl. 9, fig. 13.
Canajoharie sh. Canajoharie, Montgomery co. N. Y.
R. Ruedemann, coll.
On slab with type of *Ulrichia ? bivertex,* pl. 9, fig. 12.

9847 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 14.
Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.
On slab with type of *Calymene senaria* var. *magnotuberculata,* pl. 9, fig. 9.

SPATHIOCARIS Clarke

Spathiocaris emersoni Clarke

9858 HYPOTYPE *Spathiocaris emersoni* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 94, pl. 31, fig. 7.
Naples beds Naples, N. Y.

9859 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 31, fig. 8, 8a, 8b.
Naples beds Naples, N. Y

Spathiocaris lata Ruedemann

9860 HOLOTYPE *Spathiocaris lata* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 94, pl. 31, fig. 6.
Chemung beds
Cotton farm, near Avoca, Steuben co. N. Y.
M. Sheehy and J. Van Deloo, coll. 1895

TECHNOPHORUS Miller

Technophorus cancellatus Ruedemann

9890 HYPOTYPE *Technophorus cancellatus* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 122, pl. 9, fig. 17.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann, coll.

9891 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 18.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann and J. Van Deloo, coll. 1905

Ulrichia ? bivertex see **Dicranella bivertex**

PHYLLOCARIDA ?

9905 HYPOTYPE *Phyllocarida* Clarke. N. Y. S. M. Bul. 107. 1907. p. 309, pl. 6, fig. 13.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9906 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9624 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 14, 15.
Guymard qtze Otisville, N. Y.
H. C. Wardell, coll. 1906

9625 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 16, 17.
Guymard qtze Otisville, N. Y.
H. C. Wardell, coll. 1906

9626 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 20, 21.
Guymard qtze Otisville, N. Y.
H. C. Wardell, coll. 1906

TRILOBITA

Acidaspis crossota see **Odontopleura crosota**

Acidaspis trentonensis see **Leonaspis ? trentonensis**

ACROLICHAS Foerste

Acrolichas conifrons (Ruedemann)

9607 HOLOTYPE *Amphilichas conifrons* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 90, pl. 30, fig. 5, 6, 7.
Acrolichas conifrons Foerste. Amer. Jour. Sci. 1920. 49:44, pl. 1, fig. 4A-B.
Trenton ls. Trenton Falls, N. Y.
Rust purchase

9608 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 30, fig. 8.
Foerste. Amer. Jour. Sci. 1920. v. 49, pl. 1, fig. 4C.
Trenton ls. Trenton Falls, N. Y.
Rust purchase

Agraulos cushingi (part) see **Camaraspis cushingi**

Agraulos cushingi (part) see **Camaraspis ruedemanni**

Amphilichas conifrons see **Acrolichas conifrons**

ARCTINURUS Castelnau

Arctinurus boltoni (Bigsby)

9631 HYPOTYPE (original & counterpart) *Paradoxides boltoni* Bigsby. Phila. Acad. Nat. Sci., Jour. 1st ser. 1825. v. 4, pt 2, p. 365.
Arctinurus boltoni Phleger. Jour. Pal. 1936. v. 10, no. 7, p. 601, fig. 16, 17.
Rochester sh. Lockport, N. Y.

ASAPHUS Brongniart

Asaphus expansus (Linne)

9632 HYPOTYPE *Entomolithus paradoxus* var. *expansus* Linne. Systemae Naturae. 12th ed. 1768. 3: 160.
Asaphus expansus Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 34, fig. 7.
Ordovician Wolchow river, Gouvern, Petersburg, Russia

9633 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 35, fig. 9.
Ordovician (Glaukonitkalk B_2b)
Wolchow river, Gouvern, Petersburg, Russia

BATHYURUS Billings

Bathyurus (?) crotalifrons see **Hystricurus crotalifrons**

Bathyurus (?) taurifrons Dwight

9634 COTYPE *Bathyurus (?) taurifrons* Dwight. Amer. Jour. Sci., 3d Ser. 1884. v. 27, no. 160, p. 252, pl. 7, fig. 1, 1a.
Rochdale ls. Rochdale, N. Y.
W. B. Dwight, coll.

9635 COTYPE Dwight. Amer. Jour. Sci., 3d Ser. 1884. v. 27, no. 160, pl. 7, fig. 2, 2a, 2b.
Rochdale ls. Rochdale, N. Y.
W. B. Dwight, coll.

9636 COTYPE Dwight. Amer. Jour. Sci., 3d Ser. 1884. v. 27, no. 160, pl. 7, fig. 3.
Rochdale ls. Rochdale, N. Y.
W. B. Dwight, coll.

Battus pusillus see **Shumardia pusilla**

Bronteus barrandii see **Scutellum barrandi**

Bronteus barrandii var. **major** see **Scutellum barrandi** var. **major**

BUMASTUS Murchison

Bumastus ioxus (Hall)

9644 HYPOTYPE *Illaenus ioxus* Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 34, fig. 8.
Rochester sh. Lockport, N. Y.

CALMONIA Clarke

Calmonia ocellus (Lake)

9645 HYPOTYPE *Phacops ocellus* Lake. S. African Mus., Ann. 1904. 4:207.
Calmonia ocellus Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:129, pl. 5, fig. 10.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 7, fig. 8.
Devonian Mount Robinson, Chartres river, West Falkland
Gov. and Mrs Allardyce, donors

9646 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 5, fig. 11, 12.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 7, fig. 3, 4.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

9647 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 5, fig. 13, 14, 15.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 7, fig. 5, 6, 7.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

CALYMENE Brongniart

Calymene callicephala var. **granulosa** see **Flexicalymene senaria** mut. **granulosa**

Calymene meeki see **Flexicalymene senaria** mut. **meeki**

Calymene niagarensis Hall

9648 HYPOTYPE *Calymene niagarensis* Hall. Geol. N. Y., Rep't 4th Dist. 1843. p. 102.
Calymmene niagarensis Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 107, pl. 21, fig. 12.
Guelph dol. Rochester, N. Y.
A. L. Arey purchase

Calymene senaria mut. **granulosa** see **Flexicalymene senaria** mut. **granulosa**

Calymene senaria var. **magnotuberculata** see **Flexicalymene senaria** var. **magnotuberculata**

Calymene senaria mut. **meeki** see **Flexicalymene senaria** mut. **meeki**

Calymmene niagarensis see **Calymene niagarensis**

Calymmene senaria var. see **Flexicalymene senaria** var. **magnotuberculata**

CAMARASPIS Ulrich & Resser

Camaraspis cushingi (Ruedemann)

9609 LECTOTYPE *Agraulos cushingi* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 89, pl. 30, fig. 2, 4.
Theresa dol. Greenfield, near Saratoga Springs, N. Y.
H. P. Cushing, coll.
On slab with type of *Camaraspis cushingi*, pl. 30, fig. 1.

9610 PARATYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 30, fig. 1.
Theresa dol. Greenfield, near Saratoga Springs, N. Y.
H. P. Cushing, coll.
On slab with type of *Camaraspis cushingi,* pl. 30, fig. 2, 4.

Camaraspis ruedemanni Resser

9611 HOLOTYPE *Agraulos cushingi* Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 30, fig. 3.
Camaraspis ruedemanni Resser. Smithson. Misc. Coll. 1942. v. 101, no. 15, p. 11.
Theresa dol. Greenfield, near Saratoga Springs, N. Y.
H. P. Cushing, coll.
On slab with type of *Elvinia ruedemanni,* Smithson. Misc. Coll., v. 103, no. 5, pl. 18, fig. 7.

CERATOCEPHALA Warder

Ceratocephala ceralepta see Odontopleura ceralepta

Ceratocephala robinia Clarke

9681 COPLASTOTYPE *Ceratocephala robinia* Clarke. N. Y. S. M. Bul. 107. 1907. p. 171; fig. p. 171.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 140, pl. 3, fig. 9.
Grande Grève ls. Dolbel brook, Grande Grève, P. Q.
J. M. Clarke, coll.

9682 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 171.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 3, fig. 11.
Grande Grève ls. Grande Grève, P. Q.
Type in Redpath Mus., McGill Univ.

9683 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 3, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

CERAURUS Green

Ceraurus crosotus see Odontopleura crosota

Ceraurus niagarensis see Cheirurus niagarensis

Ceraurus ruedemanni Raymond

9689 HOLOTYPE *Ceraurus ruedemanni* Raymond. N. Y. S. M. Bul. 189. 1916. p. 121, pl. 30, fig. 9.
Up. Chazy (Valcour) ls. Little Monty bay, Chazy, N. Y.
R. Ruedemann, coll.

9690 PARATYPE Raymond. N. Y. S. M. Bul. 189. 1916. pl. 30, fig. 10.
Up. Chazy (Valcour) ls. Little Monty bay, Chazy, N. Y.
R. Ruedemann, coll.

9691 PARATYPE Raymond. N. Y. S. M. Bul. 189. 1916. pl. 30, fig. 11.
Up. Chazy (Valcour) ls. Little Monty bay, Chazy, N. Y.
R. Ruedemann, coll.

9692 PARATYPE Raymond. N. Y. S. M. Bul. 189. 1916. pl. 30, fig. 12.
Up. Chazy (Valcour) ls. Little Monty bay, Chazy, N. Y.
R. Ruedemann, coll.

CHEIRURUS Beyrich

Cheirurus niagarensis (Hall)

9693 HYPOTYPE *Ceraurus niagarensis* Hall. N. Y. S. Cab. Nat. Hist., Ann. Rep't 20. 1867. p. 376.
Cheirurus niagarensis Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 34, fig. 9.
Rochester sh. Rochester, N. Y.

CORDANIA Clarke

Cordania becraftensis Clarke

9694 HYPOTYPE: HYPOPLASTOTYPE *Cordania becraftensis* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 136, pl. 9, fig. 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

Cordania gasepiou Clarke

9695 HOLOTYPE *Cordania gasepiou* Clarke. N. Y. S. M. Bul. 107. 1907. p. 172; fig. p. 172.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 136, pl. 9, fig. 10.

Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll.

9696 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 9, fig. 9.

Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
Charles Schuchert, coll.

Type in U. S. N. M.

CRYPTOLITHUS Green

Cryptolithus bellulus (Ulrich)

9699 HYPOTYPE *Trinucleus bellulus* Ulrich. Cin. Soc. N. H., Jour. 1878. 1:99.

Cryptolithus bellulus Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 106, pl. 21, fig. 1.

Whetstone Gulf sh.
Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

9700 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 21, fig. 2.

Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

9701 HYPOTYPE *Cryptolithus lorrainensis* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 107, pl. 21, fig. 4.

Cryptolithus bellulus Whittington. Jour. Pal. 1941. v. 15, no. 1, p. 30, pl. 5, fig. 26.

Lorraine beds Lorraine, Jefferson co. N. Y.

9702 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 21, fig. 5.

Whittington. Jour. Pal. 1941. v. 15, no. 1, pl. 5, fig. 22.

Pulaski beds Lorraine, N. Y.
R. Ruedemann, coll.

Cryptolithus lorrainensis see **Cryptolithus bellulus**

Cryptolithus tessellatus Green

9703 HYPOTYPE *Cryptolithus tessellatus* Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 34, fig. 1, 2, 3.
Trenton ls. Plattsburg, N. Y.
G. Van Ingen, coll.

9704 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 35, fig. 1.
Trenton ls. Boonville, N. Y.

9705 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 35, fig. 2.
Trenton ls. Boonville, N. Y.

9706 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 35, fig. 3.
Trenton ls. Boonville, N. Y.

9707 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 35, fig. 4.
Trenton ls. Boonville, N. Y.

9708 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 35, fig. 5.
Trenton ls. Boonville, N. Y.

9709 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 35, fig. 6.
Trenton ls. Boonville, N. Y.
Rust purchase

9710 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 35, fig. 7.
Trenton ls. Boonville, N. Y.

9711 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 114, pl. 21, fig. 6.
Snake Hill beds Saratoga lake, N. Y.
R. Ruedemann and J. Van Deloo, coll.

DALMANITES Barrande

Dalmanites sp.

9712 HYPOPLASTOTYPE *Dalmanites* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 67, pl. 12, fig. 7.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

Dalmanites sp.

9713 HYPOTYPE: HYPOPLASTOTYPE *Dalmanites* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 67, pl. 12, fig. 6.
Moose River ss. Blind Cove point, Telos lake, Me.
O. O. Nylander, coll. 1905

Dalmanites sp.

9714 HYPOTYPE *Dalmanites* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 67, pl. 12, fig. 8.
Moose River ss. Tomhegan point, Moosehead lake, Me.
O. O. Nylander, coll. 1905

Dalmanites (Mesembria) acacia (Schwarz)

9715 HYPOPLASTOTYPE (and counterpart of hypotype) *Phacops acacia* Schwarz. Albany (Grahamstown, S. Africa) Mus., Rec. 1906. v. 1, no. 6, p. 398.
Dalmanites (Mesembria) acacia Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:116, pl. 5, fig. 5.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 4, fig. 2.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

9716 HYPOPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 5, fig. 6.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 4, fig. 1.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

9717 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min do Brasil. 1913. v. 1, pl. 5, fig. 7, 8.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 4, fig. 3, 4.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

9718 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 5, fig. 9.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

Dalmanites (Probolium) biardi see Synphoroides biardi

Dalmanites dolbeli see Synphoria dolbeli

Dalmanites emarginatus see Odontochile ? emarginatus

Dalmanites (Probolium) esnoufi see Synphoroides esnoufi

Dalmanites falklandicus Clarke

9719 COTYPE *Dalmanites falklandicus* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:105, pl. 5, fig. 1.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 4, fig. 5.
Devonian Fox bay, West Falkland
Thore Halle, don.

9720 COTYPE (original & counterpart) Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 5, fig. 2.
Devonian Fox bay, West Falkland
Thore Halle, don.
On slab with type of *Dalmanites falklandicus,* pl. 5, fig. 3.

9721 COTYPE: COPLASTOTYPE (original & counterpart) Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 5, fig. 3.
Devonian Fox bay, West Falkland
Thore Halle, don.
On slab with type of *Dalmanites falklandicus,* pl. 5, fig. 2.

9722 COTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 5, fig. 4.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 4, fig. 6.
Devonian Fox bay, West Falkland
Thore Halle, don.

Dalmanites gaveyi Clarke

9723 COTYPE *Dalmanites gaveyi* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

9724 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. p. 160; fig. p. 161.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 128, pl. 8, fig. 9.

Delo. G. S. A., Spec. P. no. 29. 1940. p. 41, pl. 4, fig. 24.

Grande Grève ls. Grande Grève, P. Q.

J. M. Clarke, coll. 1904

Dalmanites griffoni see **Synphoroides ? griffoni**

Dalmanites lowi see **Synphoria ? lowi**

Dalmanites micrurus see **Odontochile micrurus**

Dalmanites micrurus see **Odontochile micrurus** var. **clarkei**

Dalmanites cf. **micrurus** see **Odontochile** cf. **micrurus**

Dalmanites (Probolium) nasutus see **Probolium nasutus**

Dalmanites perceensis see **Odontochile perceensis**

Dalmanites phacoptyx see **Odontochile phacoptyx** var. **gaspensis**

Dalmanites pleuroptyx see **Synphoroides pleuroptyx**

Dalmanites ploratus see **Odontochile ploratus**

Dalmanites ulrichi Katzer

9725 HOLOTYPE *Dalmanites (Odontochile) ulrichi* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.—Nat. Cl., Sitz. 1897. 46:17.

Dalmanites ulrichi Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 278, pl. 15, fig. 18 a, b, c.

Devonian: Ereré group Ereré, Brazil

Dalmanites (Odontochile) ulrichi see **Dalmanites ulrichi**

Dalmanites ? veiti Clarke

9726 HOLOTYPE: HOLOPLASTOTYPE *Dalmanites veiti* Clarke. N. Y. S. M. Bul. 107. 1907. p. 159; fig. p. 159.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 124; low. mid. fig. p. 124; pl. facing p. 124.

Dalmanites ? veiti Delo. G. S. A., Spec. P. no. 29. 1940. p. 50, pl. 4, fig. 22; pl. 6, fig. 7.

Grande Grève ls.

Loose on hills behind Peninsula, Gaspé basin, P. Q.

Samuel Veit, coll.

On slab with types of *Dalmanites ? veiti,* low. right fig. p. 124; *Odontochile phacoptyx* var. *gaspensis,* left fig. p. 123.

9727 PARATYPE: PARAPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 159.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. low. right fig. p. 124; pl. facing p. 124.
Grande Grève ls.
Loose on hills behind Peninsula, Gaspé basin, P. Q.
S. Veit, coll.
On slab with types of *D. ? veiti,* low. mid. fig. p. 124; *O. Phacoptyx* var. *gaspensis,* left fig. p. 123.

9728 PARATYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 159.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. low. left fig. p. 124.
Grande Grève ls.
Loose on hills behind Peninsula, Gaspé basin, P. Q.
S. Veit, coll.
On slab with types of *D. ? veiti,* up. fig. p. 124; *O. phacoptyx* var. *gaspensis,* right fig. p. 123.

9729 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 159.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. up. fig. p. 124.
Grande Grève ls.
Loose on hills behind Peninsula, Gaspé basin, P. Q.
S. Veit, coll.
On slab with types of *D. ? veiti,* low. left fig. p. 124; *O. phacoptyx* var. *gaspensis,* right fig. p. 123.

Dalmanites whiteavesi see **Synphoria ? whiteavesi**

DICRANURUS Conrad

Dicranurus limenarcha Clarke

9730 HOLOTYPE: HOLOPLASTOTYPE *Dicranurus limenarcha* Clarke. N. Y. S. M. Bul. 80. 1905. p. 153; fig. p. 153.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 68; fig. p. 68.
Cape Barré beds The Murailles, Percé, P. Q.
J. M. Clarke, coll.

DIPLEURA Green

Dipleura dekayi Green

9745 HYPOTYPE *Homalonotus dekayi* Hall & Clarke. Pal. N. Y. 1888. 7:7, pl. 4, fig. 4, 5.
Hamilton beds Madison co. N. Y.

Entomolithus paradoxus var. expansus see Asaphus expansus

EOHARPES Raymond

Eoharpes ottawaensis (Billings)

9736 HYPOTYPE *Harpes ottawaensis* Billings. Can. G. S., Paleo. Foss. 1865. 1:182.
Eoharpes ottawaensis Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 116, pl. 9, fig. 1.
Snake Hill beds Snake hill, Saratoga co. N. Y.

FLEXICALYMENE Shirley

Flexicalymene senaria (Conrad) mut. granulosa (Foerste)

9649 HYPOTYPE: HYPOPLASTOTYPE *Calymene callicephala* var. *granulosa* Foerste. Denison Univ., Sci. Lab., Bul. 1909. 14: 294.
Calymene senaria mut. *granulosa* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 133, pl. 20, fig. 8.
Whetstone Gulf sh. Station 3 of Wood creek section, N. Y.
R. Ruedemann, coll.

Flexicalymene senaria (Conrad) var. magnotuberculata (Ruedemann)

9650 HOLOTYPE *Calymmene senaria* var. Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 120, pl. 9, fig. 10.
Calymene senaria var. *magnotuberculata* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 136.
Canajoharie sh. Sprakers, N. Y.
R. Ruedemann, coll.

9651 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 6.
Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

9652 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 7.
Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann. coll.

9653 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 8.
Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

9654 PARATYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 9.
Canajoharie sh. Canajoharie, N. Y.
R. Ruedemann, coll.

On slab with type of *Primitiella unicornis* var., pl. 9, fig. 14.

Flexicalymene senaria (Conrad) mut. meeki (Foerste)

9655 HYPOTYPE *Calymene meeki* Foerste. Denison Univ., Sci. Lab., Bul. 1910. 16:84.

Calymene senaria mut. *meeki* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 133, pl. 20, fig. 7.
Pulaski drift Oneida co. N. Y.
Rust purchase

GASPELICHAS Clarke

Gaspelichas forillonia (Clarke)

9740 HOLOTYPE *Lichas (Gaspelichas) forillonia* Clarke. N. Y. S. M. Bul. 107. 1907. p. 167; fig. p. 168.

Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 137, pl. 2, fig. 1, 2.

Gaspelichas forillonia Phleger. Jour. Pal. 1936. v. 10, no. 7, p. 602; p. 601, fig. 18.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9741 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 1, fig. 1, 2; pl. 2, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9742 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 3, fig. 1.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll

9743 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 3, fig. 2.
Grande Grève ls. Dolbel brook, Grande Grève, P. Q.
J. M. Clarke, coll.

9744 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 3, fig. 3, 4.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Harpes ottawaensis see **Eoharpes ottawaensis**

HOMALONOTUS Koenig

Homalonotus dekayi see **Dipleura dekayi**

Homalonotus herscheli Murchison

9746 HYPOTYPE *Homalonotus herschelii* Murchison. Murchison's Sil. Syst. 1839. pt 2, p. 652.
Homalonotus herscheli Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, p. 93, pl. 3, fig. 1.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 3, fig. 6.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

9747 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 3, fig. 2.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 3, fig. 3.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

9748 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 3, fig. 3.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 3, fig. 4.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

9749 HYPOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 3, fig. 4.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 3, fig. 5.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors

Homalonotus longicaudatus see **Turcopyge eduardi**

Homalonotus (vanuxemi-major) perceensis Clarke

9750 COTYPE *Homalonotus (vanuxemi-major) perceensis* Clarke. N. Y. S. M. Bul. 164. 1913. p. 138; up. & mid. fig. pl. A, facing p. 138.
Grande Grève ls. Percé, P. Q.
J. M. Clarke, coll. 1912

9751 COTYPE Clarke. N. Y. S. M. Bul. 164. 1913. low. fig. pl. A, facing p. 138.
Grande Grève ls. Percé, P. Q.
J. M. Clarke, coll. 1912

Homalonotus vanuxemi Hall

9752 HYPOTYPE *Homalonotus vanuxemi* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 95, pl. 22, fig. 2.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9753 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 22, fig. 3.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9754 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 22, fig. 4.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

9755 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 22, fig. 5, 6.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Homalonotus cf. **vanuxemi** Hall

9756 HYPOTYPE *Homalonotus* cf. *vanuxemi* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 67, pl. 12, fig. 1.
Moose River ss. Matagamon lake, Me.
O. O. Nylander, coll. 1905

HOMOTELUS Raymond

Homotelus stegops (Green)

9757 HYPOTYPE *Isotelus stegops* Green. Mon. Trilobites N. A. 1832. p. 71.

Homotelus stegops Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 126, pl. 22, fig. 1.

Whetstone Gulf sh. Station 8 of Wood creek section, N. Y.
R. Ruedemann, coll.

9758 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 22, fig. 2.

Utica-Frankfort transition beds Holland Patent, N. Y.
Rust purchase

9759 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 22, fig. 3.

Whetstone Gulf sh. Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.

On slab with type of *Stomatopora arachnoidea,* Bul. 262, p. 87, fig. 67.

9760 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 22, fig. 4.

Whetstone Gulf sh.
Station 10 of Wood creek section, N. Y.
R. Ruedemann, coll.

On slab with type of *Aparchites minutissimus,* pl. 23, fig. 2.

9761 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 22, fig. 5.

Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

9762 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 22, fig. 6.

Whetstone Gulf sh. Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll. 1915

9763 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 22, fig. 7.

Utica-Frankfort transition beds Holland Patent, N. Y.
Rust purchase

9764 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 22, fig. 8.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase
On slab with type of *Stylonurus* sp., pl. 26, fig. 4.

9765 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 22, fig. 9.
Whetstone Gulf sh. Station 1 of Wood creek section, N. Y.
R. Ruedemann, coll.
On slab with type of *Heterocrinus difficilis,* type of description p. 70.

HYSTRICURUS Raymond

Hystricurus crotalifrons (Dwight)

9766 COTYPE *Bathyurus (?) crotalifrons* Dwight. Amer. Jour. Sci., 3d Ser. 1884. v. 27, no. 160, p. 253, pl. 7, fig. 5.
Rochdale ls. Rochdale, N. Y.
W. B. Dwight, coll.

Illaenus ioxus see **Bumastus ioxus**

ISOTELUS Dekay

Isotelus gigas Dekay

9767 HYPOTYPE *Isotelus gigas* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 116, pl. 10, fig. 1.
Schenectady beds Rexford Flats, Saratoga co. N. Y.

9768 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 34, fig. 6.
Trenton ls. Trenton Falls, N. Y.
Rust purchase, 1890

Isotelus pulaskiensis Ulrich

9769 HYPOTYPE *Isotelus pulaskiensis* (Ulrich ms.) Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 128, pl. 20, fig. 3.
Pulaski drift Near Mansfield, Tioga co. Pa.
R. Ruedemann, coll.

Isotelus stegops see **Homotelus stegops**

LEONASPIS R. and E. Richter

Leonaspis ? trentonensis (Hall)

9773 HYPOTYPE *Acidaspis trentonensis* Hall. Pal. N. Y. 1847. 1:240.
Leonaspis ? trentonensis Whittington. Jour. Pal. 1941. v. 15, no. 5, p. 502, pl. 74, fig. 35, 36.
Trenton ls. Trenton Falls, N. Y.

9774 HYPOTYPE Whittington. Jour. Pal. 1941. v. 15, no. 5, pl. 74, fig. 37.
Trenton ls. Trenton Falls, N. Y.

LICHAS Dalman

"Lichas" bellamicus Clarke

9777 HOLOTYPE *Lichas bellamicus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 170; fig. p. 170.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 137, pl. 3, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9778 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 3, fig. 5.
Grande Grève ls. Indian cove, Gaspé, P. Q.
J. M. Clarke, coll. 1902

9779 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 3, fig. 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9780 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 3, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

Lichas (Gaspelichas) forillonia see **Gaspelichas forillonia**

MARRELLA Walcott

Marrella splendens Walcott

9781 HYPOTYPE *Marrella splendens* Walcott. Smithson. Misc. Coll. 1912. v. 57, no. 6, p. 193.
Ruedemann. U. S. N. M., Pr. 1931. v. 79, art. 27, p. 9, pl. 3, fig. 1, 2.
Burgess sh. Burgess pass, near Field, British Columbia

ODONTOCHILE Hawle & Corda

Odontochile ? emarginatus (Hall)

9782 HYPOTYPE: HYPOPLASTOTYPE *Dalmanites emarginatus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 127, pl. 7, fig. 2.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9783 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 7, fig. 3.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9784 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 138, pl. 32, fig. 3.
Oriskany ss. Pine hill, near Highland Mills, N. Y.
H. C. Wardell, coll. 1908

Odontochile micrurus (Green)

9785 HYPOPLASTOTYPE *Dalmanites micrurus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 18, pl. 1, fig. 2.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9786 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 9, fig. 2.
Coeymans ls. Schoharie, N. Y.
John Gebhard Jr., coll.

Odontochile cf. **micrurus** (Green)

9787 HYPOTYPE: HYPOPLASTOTYPE *Dalmanites* cf. *micrurus* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 96, pl. 22, fig. 7.
Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

Odontochile micrurus (Green) var. **clarkei** Delo

9788 HOLOTYPE *Dalmanites micrurus* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 120, pl. 9, fig. 3.
Odontochile micrurus var. *clarkei* Delo. G. S. A., Spec. P. no. 29. 1940. p. 59, pl. 5, fig. 3.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll.

9789 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 10.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9790 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 12.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9791 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 9, fig. 1.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Odontochile perceensis (Clarke)

9792 COTYPE *Dalmanites perceensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 157; fig. p. 157.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 126, pl. 4, fig. 1.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9793 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 4, fig. 2.
Odontochile perceensis Delo. G. S. A., Spec. P. no. 29. 1940. p. 59, pl. 5, fig. 6.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9794 COTYPE Clarke. N. Y. S. M., Bul. 107. 1907. fig. p. 158.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 4, fig. 3.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9795 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 5, fig. 2.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 5, fig. 5.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke. coll.

Odontochile phacoptyx (Hall & Clarke) var. **gaspensis** Delo

9796 COTYPE *Dalmanites phacoptyx* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 123, pl. 7, fig. 8.
Odontochile phacoptyx var. *gaspensis* Delo. G. S. A., Spec. P. no. 29. 1940. p. 61, pl. 5, fig. 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

9797 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 7, fig. 5.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9798 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 7, fig. 6, 7.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9799 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 7, fig. 9.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9800 COTYPE (original & counterpart) Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. left fig. p. 123; pl. facing p. 124.
Grande Grève ls.
Loose on hills behind Peninsula, Gaspé basin, P. Q.
Samuel Veit, coll.
On slab with types of *Dalmanites? veiti,* low. mid. & low. right fig's p. 124.

9801 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. right fig. p. 123.
Grande Grève ls.
Loose on hills behind Peninsula, Gaspé basin, P. Q.
Samuel Veit, coll.
On slab with types of *D. ? veiti,* low. left & up. fig's p. 124.

Odontochile ploratus (Clarke)

9802 HOLOTYPE: HOLOPLASTOTYPE *Dalmanites ploratus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 161; fig. p. 162.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 66, pl. 12, fig. 5.
Odontochile ploratus Delo. G. S. A., Spec. P. no. 29. 1940. p. 61, pl. 5, fig. 8.
Moose River ss. Cunningham's camp, Matagamon lake, Me.
O. O. Nylander, coll. 1905

ODONTOPLEURA Emmrich

Odontopleura ceralepta (Anthony)

9803 HYPOTYPE *Ceratocephala ceralepta* Anthony. Amer. Jour. Sci. 1838. 34:379.
Odontopleura ceralepta Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 131, pl. 22, fig. 10.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

Odontopleura crosota (Locke)

9804 HYPOTYPE *Ceraurus crosotus* Locke. Amer. Jour. Sci. 1843. 44:346.
Acidaspis crossota Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 119, pl. 9, fig. 4.
Indian Ladder beds Indian Ladder, Albany co. N. Y.
R. Ruedemann, coll.

9805 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 5.
Indian Ladder beds Indian Ladder, Albany co. N. Y.
R. Ruedemann, coll.

9806 HYPOTYPE *Odontopleura crosota* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 130, pl. 22, fig. 11.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase

Olenus undulostriatus see **Proëtus undulostriatus**

Paradoxides boltoni see **Arctinurus boltoni**

Paradoxides eatoni see **Triarthus eatoni**

PHACOPINA Clarke

Phacopina ? correlator (Clarke)

9825 HYPOTYPE: HYPOPLASTOTYPE *Phacops (Phacopidella) correlator* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 226, pl. 10, fig. 17.

Phacopina ? correlator Delo. G. S. A., Spec. P. no. 29. 1940. p. 32, pl. 2, fig. 29.

Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

9826 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 18.

Delo. G. S. A., Spec. P. no. 29. 1940. pl. 2, fig. 28.

Gaspé ss. Gaspé basin, Gaspé, P. Q.
J. M. Clarke, coll. 1900

Phacopina nylanderi (Clarke)

9827 HOLOTYPE *Phacops (Phacopidella) nylanderi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 166; fig. p. 166.

Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 96, pl. 22, fig. 1.

Phacopina nylanderi Delo. G. S. A., Spec. P. no. 29 1940. p. 33, pl. 2, fig. 26.

Chapman ss. Edmunds hill, Chapman plantation, Me.
O. O. Nylander, coll. 1905

PHACOPS Emmrich

Phacops acacia see **Dalmanites (Mesembria) acacia**

Phacops (Phacopidella) correlator see **Phacopina ? correlator**

Phacops goeldi Katzer

9828 COTYPE *Phacops goeldii* Katzer. Kgl. Böhm. Gesell. Wiss. Mat.-Nat. Cl., Sitz. 1897. 46:11.

Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. p. 277. pl. 15, fig. 6a, b.

Devonian: Maecurú group Rio Maecurú, Brazil

9829 COTYPE Katzer. Grundz. Geol. Unt. Amazonasgeb. 1903. pl. 15, fig. 6c, d.
Devonian: Maecurú group Rio Maecurú, Brazil

Phacops logani Hall

9830 HYPOTYPE *Phacops logani* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 118, pl. 10, fig. 1.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

9831 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 2.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll. 1900

9832 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 3.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

9833 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 4.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

9834 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 8.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

9835 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 9.
Grande Grève ls. Percé rock, Percé, P. Q.
J. M. Clarke, coll.

Phacops logani Hall var. **gaspensis** Clarke

9836 COPLASTOTYPE *Phacops logani* var. *gaspensis* Clarke. N. Y. S. M. Bul. 107. 1907. p. 165; fig. p. 165.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 119, pl. 10, fig. 6.
Delo. G. S. A., Spec. P. no. 29. 1940. p. 20, pl. 1, fig. 12.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9837 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 10.
Grande Grève ls.
Between Grande Grève and Little Gaspé, P. Q.
J. M. Clarke, coll. 1904

9838 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 165.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 11, 12, 13.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 1, fig. 10.
Grande Grève ls. Gaspé basin, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9839 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 14, 15.
Grande Grève ls. Along the Forillon, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9840 HYPOTYPE: HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 10, fig. 16.
St Alban beds Grande Cavée of Griffon Cove river, P. Q.
J. M. Clarke, coll. 1900

Phacops (Phacopidella) nylanderi see **Phacopina nylanderi**

Phacops ocellus see **Calmonia ocellus**

PROBOLIUM Oehlert

Probolium nasutus (Conrad)

9848 HYPOTYPE *Probolium nasutus* Delo. G. S. A., Spec. P. no. 29. 1940. p. 77, pl. 9, fig. 1.
New Scotland beds Near Clarksville, N. Y.
J. M. Clarke, coll.

PROËTUS Steininger

Proëtus sp.

9849 HYPOTYPE *Proëtus* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 19, pl. 1, fig. 4.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9850 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 1, fig. 5.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

9851 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 1, fig. 6.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Proëtus sp.

9852 HYPOTYPE: HYPOPLASTOTYPE *Proëtus* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 5. 1903. p. 108, pl. 21, fig. 13.
Guelph dol. Rochester, N. Y.
A. L. Arey, coll.

Proëtus sp.

9853 HYPOTYPE: HYPOPLASTOTYPE *Proëtus* sp. Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:139, pl. 4, fig. 23.
Devonian Port Louis, East Falkland
Thore Halle, don.

On slab with types of *Chonetes falklandicus,* pl. 24, fig. 1, 2.

Proëtus phocion Billings

9854 HYPOTYPE *Proëtus phocion* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 135, pl. 9, fig. 16.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Proëtus undulostriatus (Hall)

9855 HOLOPLASTOTYPE *Olenus undulostriatus* Hall. Pal. N. Y. 1847. 1: 258, pl. 67, fig. 3a, b.

Proëtus undulostriatus Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 117, pl. 9, fig. 2.
Snake Hill beds Snake hill, Saratoga co. N. Y.
Type in A. M. N. H.

9856 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 162. 1912. pl. 9, fig. 3.
Snake Hill beds Snake hill, Saratoga co. N. Y.
R. Ruedemann and J. Van Deloo, coll. 1905

SCUTELLUM Pusch

Scutellum barrandi (Hall)

9642 HYPOTYPE: HYPOPLASTOTYPE *Bronteus barrandii* Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 104, pl. 9, fig. 12, 13.
St Alban beds Cape Rosier cove, P. Q.
J. M. Clarke, coll. 1900

Scutellum barrandi (Hall) var. **major** (Clarke)

9643 HOLOTYPE *Bronteus barrandii* var. *major* Clarke. N. Y. S. M. Bul. 107. 1907. p. 167; fig. p. 167.
Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 18, pl. 1, fig. 7.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

SHUMARDIA Billings

Shumardia pusilla (Sars)

9857 HYPOTYPE *Battus pusillus* Sars. Okens Isis. 1835. p. 333.
Shumardia pusilla Ruedemann. G. S. A., Mem. 2. 1934. p. 97, pl. 25, fig. 11.
Deepkill sh. Stuyvesant, N. Y.
R. Ruedemann and W. Goldring, coll. 1927

SYNPHORIA Clarke

Synphoria dolbeli (Clarke)

9861 COTYPE *Dalmanites dolbeli* Clarke. N. Y. S. M. Bul. 107. 1907. p. 155; fig. p. 155.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 121, pl. 8, fig. 1.
Synphoria dolbeli Delo. G. S. A., Spec. P. no. 29. 1940. p. 66, pl. 7, fig. 15.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9862 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 2.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 7, fig. 14.
Grande Grève ls. Gaspé basin, P. Q.
J. M. Clarke, coll. 1900

9863 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 3.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 7, fig. 16.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll. 1904

9864 COTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 4.
Grande Grève ls. Shiphead cape, Gaspé, P. Q.
J. M. Clarke, coll. 1900

9865 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 5.
Grande Grève ls. Lehuquet's cove, Grande Grève, P. Q.
J. M. Clarke, coll. 1904

9866 COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
Charles Schuchert, coll.
Type in U. S. N. M.

Synphoria ? lowi (Clarke)

9867 COTYPE *Dalmanites lowi* Clarke. N. Y. S. M. Bul. 107. 1907. p.156.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 122, pl. 9, fig. 6.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9868 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 9, fig. 7.
Synphoria ? lowi Delo. G. S. A., Spec. P. no. 29. 1940. p. 67, pl. 7, fig. 13.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1900

9869 COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 156.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 9, fig. 8.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 7, fig. 12.
Grande Grève ls. Gaspé basin, Grande Grève, P. Q.
J. M. Clarke, coll. 1900

Synphoria ? whiteavesi (Clarke)

9870 HOLOTYPE: HOLOPLASTOTYPE *Dalmanites whiteavesi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 160; fig. p. 160.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 125, pl. 8, fig. 11.
Synphoria ? whiteavesi Delo. G. S. A., Spec. P. no. 29. 1940. p. 69, pl. 7, fig. 11.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

9871 PARAPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 8, fig. 13.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 7, fig. 10.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll.

SYNPHOROIDES Delo

Synphoroides biardi (Clarke)

9872 HOLOTYPE *Dalmanites (Probolium) biardi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 162.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 129, pl. 6, fig. 8.
Synphoroides biardi Delo. G. S. A., Spec. P. no. 29. 1940. p. 79, pl. 9, fig. 5.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9873 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 1.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9874 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 2.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9875 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 3.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 9, fig. 7.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9876 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 4.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 9, fig. 6.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9877 PARATYPE: PARAPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 5.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9878 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 163.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 6.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9879 PARATYPE: PARAPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 7.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9880 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 9.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9881 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 10.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

9882 PARATYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 11.
Grande Grève ls. Percé rock, P. Q.

9883 PARATYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. fig. p. 163.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 6, fig. 12.
Delo. G. S. A., Spec. P. no. 29. 1940. pl. 9, fig. 4.
Grande Grève ls. Percé rock, P. Q.
J. M. Clarke, coll.

Synphoroides esnoufi (Clarke)

9884 HOLOTYPE *Dalmanites (Probolium) esnoufi* Clarke. N. Y. S. M. Bul. 107. 1907. p. 164; fig. p. 164.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 130, pl. 9, fig. 5.
Synphoroides esnoufi Delo. G. S. A., Spec. P. no. 29. 1940. p. 80, pl. 9, fig. 8.
Grande Grève ls. Grande Grève, P. Q.
J. M. Clarke, coll. 1904

Synphoroides ? griffoni (Clarke)

9885 HOLOTYPE: HOLOPLASTOTYPE *Dalmanites griffoni* Clarke. N. Y. S. M. Bul. 107. 1907. p. 153; fig. p. 153.
Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. p. 103, pl. 9, fig. 4.
Synphoroides ? griffoni Delo. G. S. A., Spec. P. no. 29. 1940. p. 80, pl. 9, fig. 9.
St Alban beds
Grande cavée of Griffon Cove river, P. Q.
J. M. Clarke, coll. 1900

9886 PARATYPE: PARAPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 1. 1908. pl. 7, fig. 4.
St Alban beds
Grande cavée of Griffon Cove river, P. Q.
J. M. Clarke, coll. 1900

Synphoroides pleuroptyx (Green)

9887 HYPOTYPE *Dalmanites pleuroptyx* Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 66, pl. 12, fig. 2.
Moose River ss. Blind Cove point, Telos lake, Me.
O. O. Nylander, coll. 1905

9888 HYPOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 12, fig. 3.
Moose River ss. Folsom farm, Moosehead lake, Me.
O. O. Nylander, coll. 1905

9889 HYPOPLASTOTYPE Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. pl. 12, fig. 4.
Moose River ss. Folsom farm, Moosehead lake, Me.
O. O. Nylander, coll. 1905

TRIARTHRUS Green

Triarthrus becki Green

9892 HYPOTYPE *Triarthrus beckii* Green. Mon. Trilobites N. A. 1832. p. 87.

Triarthrus becki Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 115, pl. 21, fig. 12.

Canajoharie sh. Stony Point, near Rouses Point, N. Y.
R. Ruedemann, coll.

Triarthrus eatoni (Hall)

9893 HYPOTYPE *Paradoxides eatoni* Hall. Amer. Jour. Sci. 1838. 33:142.

Triarthrus eatoni Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 119, pl. 21, fig. 7.

Utica sh. Oxtungo creek, Fort Plain, N. Y.
R. Ruedemann, coll.

On slab with type of *Triarthrus eatoni,* pl. 21, fig. 8.

9894 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 21, fig. 8.

Utica sh. Oxtungo creek, Fort Plain, N. Y.
R. Ruedemann, coll.

On slab with type of *Triarthrus eatoni,* pl. 21, fig. 7.

Triarthrus huguiensis Foerste

9895 HYPOTYPE *Triarthrus huguiensis* Foerste. Can. G. S., Mem. 138. 1924. p. 241.

Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 123, pl. 20, fig. 5.

Whetstone Gulf sh.
Station 12 of Mill Creek section, N. Y.
R. Ruedemann, coll. 1916

9896 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 20, fig. 6.

Whetstone Gulf sh.
Station 12 of Mill Creek section, N. Y.
R. Ruedemann, coll.

On slab with types of *Zygospira modesta, Colpomya faba* mut. *intermedia, Pterinea* sp. nov., all pl. 20, fig. 6.

Triarthrus spinosus Billings

9897 HYPOTYPE *Triarthrus spinosus* Billings. Can. G. S., Rep't Prog. for 1853-56. 1857. p. 340.
Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 121, pl. 21, fig. 13.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

9898 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 21, fig. 14.
Up. Utica sh. Holland Patent, N. Y.

9899 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 21, fig. 15.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

9900 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. pl. 21, fig. 16.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

TRINUCLEUS Murchison

Trinucleus bellulus see **Cryptolithus bellulus**

Trinucleus bucklandi Barrande

9901 HYPOTYPE *Trinucleus bucklandi* Barrande. Notice Preliminaire sur le Systeme Silurien et les Trilobites de Boheme. 1846. p. 31.
Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 34, fig. 5.
Ordovician Girvan, Scotland

Trinucleus concentricus see **Cryptolithus tessellatus**

TURCOPYGE Richter & Richter

Turcopyge eduardi Richter & Richter

9902 HOLOTYPE: HOLOPLASTOTYPE *Homalonotus longicaudatus* Clarke. Arch. do Mus. Nac. do Rio de Janeiro. 1890. v. 9, p. 14, pl. 1, fig. 8.
Turcopyge eduardi Richter & Richter. Preuss. Geol. Landes., Abh. n. f. H. 190. 1939. 4:40.
Low. Devonian
Rumeli Hissar, near Istanbul (Constantinople), Turkey
E. K. Emerson exchange

ARACHNIDA

BUNAIA Clarke

Bunaia woodwardi Clarke

9909 COTYPE *Bunaia woodwardi* Clarke. Geol. Mag., n. s., dec. 6. 1919. v. 6, no. 12, p. 531, pl. 14, fig. 1.

Clarke. N. Y. S. M. Bul. 219-220. 1920. p. 129, pl. 1, fig. 1.

Bertie wl. East Buffalo, N. Y.
E. Reinhard purchase

On slab with types of *Bunaia woodwardi,* pl. 14, fig. 2, 3, 4.

9910 COTYPE Clarke. Geol. Mag., n. s., dec. 6. 1919. v. 6, no. 12, pl. 14, fig. 2.

Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 1, fig. 2.

Bertie wl. East Buffalo, N. Y.
E. Reinhard purchase

On slab with types of *Bunaia woodwardi,* pl. 14, fig. 1, 3, 4.

9911 COTYPE Clarke. Geol. Mag., n. s., dec. 6. 1919. v. 6, no. 12, pl. 14, fig. 3.

Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 1, fig. 3.

Bertie wl. East Buffalo, N. Y.
E. Reinhard purchase

On slab with types of *Bunaia woodwardi,* pl. 14, fig. 1, 2, 4.

9912 COTYPE Clarke. Geol. Mag., n. s., dec. 6. 1919. v. 6, no. 12, pl. 14, fig. 4.

Clarke. N. Y. S. M. Bul. 219-220. 1920. pl. 1, fig. 4.

Bertie wl. East Buffalo, N. Y.
E. Reinhard purchase

On slab with types of *Bunaia woodwardi,* pl. 14, fig. 1, 2, 3.

CARCINOSOMA Claypole

Carcinosoma sp.

10041 HYPOTYPE *Eusarcus* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 10.

Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10042 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 11.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10043 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 12.
Schenectady sh. Rotterdam Junction, N. Y.
R. Ruedemann, coll. 1910

10044 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 13.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10045 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 14.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10046 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 15.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10047 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 16.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10048 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 17.
Schenectady sh. Aqueduct, Schenectady co. N. Y.
R. Ruedemann, coll. 1910

10049 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 18.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10050 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 20.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

Carcinosoma breviceps (Ruedemann)

10051 HOLOTYPE *Eusarcus breviceps* Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 152, pl. 26, fig. 2.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

On slab with types of *Trocholites ammonius* var. *major,* pl. 17, fig. 1; *Dolichopterus insolitus,* pl. 26, fig. 1.

Carcinosoma (?) cicerops (Clarke)

10052 HOLOTYPE *Eurypterus ? cicerops* Clarke. N. Y. S. M. Bul. 107. 1907. p. 307, pl. 5, fig. 10.
Eusarcus (?) cicerops Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 253; pt 2, pl. 36, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10053 HYPOTYPE: HYPOPLASTOTYPE *Hughmilleria shawangunk* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. 7.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 36, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10054 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 36, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10055 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 36, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10056 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 36, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10057 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 36, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10058 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 36, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10059 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 36, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10060 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 36, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Carcinosoma linguatum (Clarke & Ruedemann)

10061 HOLOTYPE *Eusarcus linguatus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 413; p. 414, fig. 96.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with types of *Stylonurus modestus,* pt 1, p. 415. fig. 100; *Pterygotus* sp., pt 1, p. 417, fig. 106.

10062 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 414, fig. 97.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with types of *Eurypterus chadwicki,* pt 1, p. 413, fig. 95; *Pterygotus* sp., pt 1, p. 417, fig. 105, 107.

Carcinosoma longiceps (Clarke & Ruedemann)

10063 HOLOTYPE *Eusarcus longiceps* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 257; pt 2, pl. 84, fig. 5.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10064 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 1.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10065 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 2.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10066 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 3.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10067 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 4.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10068 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 6.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

Carcinosoma newlini (Claypole)

10069 HYPOTYPE *Eurysoma newlini* Claypole. Amer. Geol. 1890. 6:258.
Eusarcus newlini Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 245; pt 2, pl. 39.
Kokomo wl. Kokomo, Ind.
Kindle purchase

10070 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 93; p. 93, fig. 33, 34.
Kokomo wl. Kokomo, Ind.
Ward purchase "Hammell collection"

Carcinosoma scorpione (Grote & Pitt)

10071 HOLOPLASTOTYPE *Eusarcus scorpionis* Grote & Pitt. Buffalo Soc. Nat. Sci., Bul. 1875. v. 3, p. 1, pl. 1.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 233; pt 2, pl. 31.
Bertie wl. Buffalo, N. Y.
Type in Buffalo Soc. Nat. Sci.

10072 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 237, fig. 54.
Bertie wl. Buffalo, N. Y.
Ward and Howell purchase, 1886

10073 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14 1912. pt 1, p. 240, fig. 57.
Bertie wl. Buffalo, N. Y.

10074 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 29.
Bertie wl. Buffalo, N. Y.
Dr Mark E. Reed purchase

10075 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 32.
Bertie wl. Buffalo, N. Y.

10076 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 33, fig. 1.
Bertie wl. Buffalo, N. Y.
Ward and Howell purchase, 1886

10077 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 33, fig. 2.
Bertie wl. Buffalo, N. Y.
Ward and Howell purchase, 1886

10078 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 34.
Bertie wl. Buffalo, N. Y.

Carcinosoma triangulatum (Clarke & Ruedemann)

10079 HOLOTYPE *Eusarcus triangulatus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 258; pt 2, pl. 84, fig. 7.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10080 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 8.
Schenectady beds Duanesburg, N. Y.
R. Ruedemann, coll. 1910

10081 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 9.
Schenectady beds — Duanesburg, N. Y.
R. Ruedemann, coll. 1910

10082 HYPOTYPE Ruedemann. Amer. Jour. Sci. 1934. 27:375; p. 376, fig. 2.
Snake Hill sh. — Mechanicville, N. Y.

Carcinosoma trigonum (Ruedemann)

10083 HOLOTYPE *Eusarcus trigonus* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 111, pl. 33, fig. 10.
Bertie wl. — Litchfield, N. Y.

Carcinosoma vaningeni (Clarke & Ruedemann)

10084 HOLOTYPE *Eusarcus vaningeni* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 420; p. 422, fig. 108.
Pittsford sh. — Farmers Mills, Oneida co. N. Y.
On slab with types of *Carcinosoma vaningeni,* pt 1, p. 422, fig. 109; p. 423, fig. 112, 113, 115.

10085 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 422, fig. 109.
Pittsford sh. — Farmers Mills, N. Y.
On slab with types of *Carcinosoma vaningeni,* pt 1, p. 422, fig. 108; p. 423, fig. 112, 113, 115.

10086 PARATYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 422, fig. 110.
Pittsford sh. — Farmers Mills, N. Y.
On slab with type of *Carcinosoma vaningeni,* pt 1, p. 423, fig. 111.

10087 PARATYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 423, fig. 111.
Pittsford sh. — Farmers Mills, N. Y.
On slab with type of *Carcinosoma vaningeni,* pt 1, p. 422, fig. 110.

10088 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 423, fig. 112.
Pittsford sh. Farmers Mills, N. Y.
G. Van Ingen, coll.
On slab with types of *Carcinosoma vaningeni,* pt 1, p. 422, fig. 108, 109; p. 423, fig. 113, 115.

10089 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 423, fig. 113.
Pittsford sh. Farmers Mills, N. Y.
On slab with types of *Carcinosoma vaningeni,* pt 1, p. 422, fig. 108, 109; p. 423, fig. 112, 115.

10090 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 423, fig. 115.
Pittsford sh. Farmers Mills, N. Y.
On slab with types of *Carcinosoma vaningeni,* pt 1, p. 422, fig. 108, 109; p. 423, fig. 112, 113.

DOLICHOPTERUS Hall

Dolichopterus antiquus Ruedemann

9913 HOLOTYPE *Dolichopterus antiquus* Ruedemann. N. Y. S. M. Bul. 327. 1942. p. 26, fig. 6 (2).
Deepkill sh. Mount Merino, below Hudson, N. Y.
R. Ruedemann & T. Y. Wilson, coll. 1934
On slab with type of *Pterygotus (?) priscus,* fig. 6 (3)

Dolichopterus breviceps Clarke & Ruedemann

9914 HOLOTYPE *Dolichopterus breviceps* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 414; p. 414, fig. 98.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1911

Dolichopterus frankfortensis Clarke & Ruedemann

9915 HOLOTYPE *Dolichopterus frankfortensis* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 268; pt 2, pl. 83, fig. 11.
Schenectady beds Rotterdam Junction, N. Y.
R. Ruedemann, coll. 1910

9916 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 9.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

9917 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 10.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

9918 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 12.
Schenectady beds Duanesburg, N. Y.
R. Ruedemann, coll. 1910

9919 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 13.
Schenectady beds Duanesburg, N. Y.
R. Ruedemann, coll. 1910

9920 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 14.
Schenectady beds Altamont, N. Y.
R. Ruedemann, coll. 1910

Dolichopterus insolitus Ruedemann

9921 HOLOTYPE *Dolichopterus insolitus* Ruedemann. N. Y. S. M Bul. 272. 1926. p. 151, pl. 26, fig. 1.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

On slab with types of *Trocholites ammonius* var. *major,* pl. 17, fig. 1; *Carcinosoma breviceps,* pl. 26, fig. 2

Dolichopterus latifrons Clarke & Ruedemann

9922 HOLOTYPE *Dolichopterus latifrons* Clarke & Ruedemann. N. Y S. M., Mem. 14. 1912. pt 1, p. 269; pt 2, pl. 83, fig. 16.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

9923 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 15.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

Dolichopterus macrocheirus Hall

9924 HYPOTYPE (original & counterpart) *Dolichopterus macrocheirus* Hall. Pal. N. Y. 1859. 3:414.
Dolichopterus macrochirus Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 262; pt 2, pl. 43.
Bertie wl. Litchfield, N. Y.
D. D. Luther, coll.

Dolichopterus otisius (Clarke)

9925 HOLOTYPE (original & counterpart) *Pterygotus ? otisius* Clarke. N. Y. S. M. Bul. 107. 1907. p. 308, pl. 6, fig. 7.
Dolichopterus otisius Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 270; pt 2, pl. 46, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9926 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9927 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9928 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9929 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9930 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9931 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9932 HYPOTYPE (Erroneously) *Eurypterus myops* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. 6.
Dolichopterus otisius Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Dolichopterus stylonuroides Clarke & Ruedemann

9933 HOLOTYPE (original & counterpart) *Dolichopterus stylonuroides* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 276; pt 2, pl. 46, fig. 13.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9934 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9935 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9936 PARATYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 11, 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9937 PARATYPE *Stylonurus ?* sp. Clarke. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. 10.
Dolichopterus stylonuroides Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 46, fig. 14.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Dolichopterus (?) testudineus Clarke & Ruedemann

9938 HOLOTYPE (original & counterpart) *Dolichopterus (?) testudineus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 274; pt 2, pl. 57, fig. 2.
Bertie wl. Litchfield, N. Y.

9939 PARATYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 57, fig. 1.
Bertie wl. Litchfield, N. Y.

ECHINOGNATHUS Walcott

Echinognathus ? "Eusarcus" ? "Stylonurus" ?

9940 HYPOTYPE *Echinognathus ? Eusarcus ? Stylonurus ?* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 84, fig. 19.
Schenectady beds Dettbarn quarry, Schenectady, N. Y.
R. Ruedemann, coll. 1910

Echinognathus clevelandi (Walcott)

9941 HYPOTYPE *Eurypterus ? clevelandi* Walcott. Amer. Jour. Sci., 3d Ser. 1882. 23:153.

Echinognathus clevelandi Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 108; p. 110, fig. 35.
Utica sh. The "Palisades" or "Gulf" at Rome, N. Y.
A. F. Foerste, coll. 1913

9942 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 110, fig. 36.
Utica sh. Holland Patent, N. Y.
Chas. Haskell, coll.

9943 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 110, fig. 37.
Utica sh. Holland Patent, N. Y.
Chas. Haskell, coll.

9944 HYPOTYPE: HYPOPLASTOTYPE Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 149, pl. 26, fig. 5.
Up. Utica sh. Holland Patent, N. Y.
Rust purchase

EURYPTERUS Dekay

Eurypterus sp.

9945 HYPOTYPE *Eurypterus* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 13, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Eurypterus ? sp.

9946 HYPOTYPE *Eurypterus ?* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 8.
Schenectady beds Dettbarn quarry, Schenectady, N. Y.

Eurypterus boylei see **Eurypterus (Tylopterus) boylei**

Eurypterus (Tylopterus) boylei Whiteaves

9947 HOLOPLASTOTYPE *Eurypterus boylei* Whiteaves. Can. G. S., Paleo. Foss. 1884. v. 3, pt 1, p. 42, pl. 7, fig. 3.
Tylopterus boylei Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 218; p. 217, fig. 42.
Guelph formation Ontario, Canada

Eurypterus ? cestrotus see **Stylonurus (Ctenopterus) cestrotus**

Eurypterus chadwicki Clarke & Ruedemann

9948 HOLOTYPE *Eurypterus chadwicki* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 413; p. 413, fig. 95.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with types of *Carcinosoma linguatum,* pt 1, p. 414, fig. 97; *Pterygotus* sp., pt 1, p. 417, fig. 105, 107.

Eurypterus ? cicerops see **Carcinosoma (?) cicerops**

Eurypterus ? clevelandi see **Echinognathus clevelandi**

Eurypterus decipiens Ruedemann

9949 HOLOTYPE *Eurypterus decipiens* Ruedemann. N. Y. S. M. Bul. 327. 1942. p. 28; p. 28, fig. 4; fig. 6 (1).
Normanskill grit (Austin Glen member)
South Bethlehem, Albany co. N. Y.
R. Ruedemann, coll. 1920

Eurypterus giganteus see **Eurypterus pustulosus**

Eurypterus hudsonicus Ruedemann

9950 HOLOTYPE *Eurypterus hudsonicus* Ruedemann. Amer. Jour. Sci. 1934. 27:374; p. 376, fig. 1.
Snake Hill sh. Mechanicville, N. Y.
R. Ruedemann, coll. 1899

On slab with type of *Hughmilleria kilfoylei,* p. 376, fig. 4.

Eurypterus kokomoensis see **Eurypterus (Onychopterus) kokomoensis**

Eurypterus (Onychopterus) kokomoensis Miller & Gurley

9951 HYPOTYPE *Eurypterus kokomoensis* Miller & Gurley. Ill. S. M. N. H., Bul. 1896. 10:90.

Eurypterus (Onychopterus) kokomoensis Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 212; pt 2, pl. 25, fig. 2.
Kokomo wl. Kokomo, Ind.

Eurypterus lacustris Harlan

9952 HYPOTYPE *Eurypterus lacustris* Harlan. Pa. Geol. Soc., Tr. 1834. 1:98.

Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 173; pt 2, pl. 10.
Bertie wl. Buffalo, N. Y.

9953 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 11, fig. 5.

Stormer. Norske Vid.-Akad. Oslo. Matem.-Naturvid. Kl., Skr. 1933. No. 10, pl. 11, fig. 6. 1934.
Bertie wl. Buffalo, N. Y.
Ward and Howell purchase, 1886

9954 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 13, fig. 3.
Bertie wl. Buffalo, N. Y.

9955 ONOMATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 80.
Akron dol. (Bullhead) North Buffalo, N. Y.
E. Reinhard purchase

9956 ONOMATYPE Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 80.
Akron dol. (Bullhead) North Buffalo, N. Y.
E. Reinhard purchase

10036 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 11, fig. 2.
Stormer. Norske Vid.-Akad. Oslo. Matem.-Naturvid. Kl., Skr. 1933. No. 10, pl. 11, fig. 5. 1934.
Bertie wl. Buffalo, N. Y.
J. M. Clarke and R. Ruedemann, coll.

Eurypterus maria Clarke

9957 HOLOTYPE *Eurypterus maria* Clarke. N. Y. S. M. Bul. 107. 1907. p. 305, pl. 2, fig. 2.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 184; pt 2, pl. 21, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9958 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 1, fig. 1.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 21, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9959 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 1, fig. 2.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 21, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9960 PARATYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. pl. 1, fig. 4.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 21, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9961 PARATYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. pl. 2, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9962 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 2, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9963 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 2, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9964 PARATYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. pl. 2, fig. 6.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 21, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9965 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 2, fig. 7.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 22, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9966 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 3, fig. 1.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 22, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9967 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 3, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9968 PARATYPE: PARAPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 3, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9969 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 3, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9970 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 3, fig. 5.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 22, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9971 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 3, fig. 7.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 22, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9972 HYPOTYPE *Eurypterus, Hughmilleria,* etc. Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 2.
Eurypterus maria Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 22, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9973 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9974 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 7.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 22, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9975 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 21, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9976 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 21, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9977 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 21, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9978 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Men. 14.
1912. pt 2, pl. 21, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9979 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14.
1912. pt 2, pl. 21, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9980 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14.
1912. pt 2, pl. 21, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9981 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14.
1912. pt 2, pl. 21, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9982 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14.
1912. pt 2, pl. 22, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9983 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14.
1912. pt 2, pl. 22, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9984 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14.
1912. pt 2, pl. 22, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9985 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14.
1912. pt 2, pl. 22, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

9986 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14.
1912. pt 2, pl. 22 fig 9
Shawangunk grit Otisville, N. Y.

9987 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 22, fig. 10.
Shawangunk grit — Otisville, N. Y.
H. C. Wardell, coll. 1906

9988 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 22, fig. 13.
Shawangunk grit — Otisville, N. Y.

Eurypterus maria see **Hughmilleria shawangunk**

Eurypterus maria see **Pterygotus (Erettopterus) globiceps**

Eurypterus maria see **Stylonurus myops**

Eurypterus megalops Clarke & Ruedemann

9989 HOLOTYPE *Eurypterus megalops* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 191; pt 2, pl. 83, fig. 7.
Schenectady beds — Rotterdam Junction, N. Y.
R. Ruedemann, coll. 1910

Eurypterus microphthalmus Hall

9990 HYPOTYPE (original & counterpart) *Eurypterus microphthalmus* Hall. Pal. N. Y. 1859. 3:407.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 192; pt 2, pl. 20, fig. 2.
Manlius beds — Litchfield, N. Y.

9991 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 20, fig. 4.
Manlius beds — Litchfield, N. Y.

9992 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 20, fig. 5.
Manlius beds — Litchfield, N. Y.

9993 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 20, fig. 8.
Manlius beds (drift) — Syracuse, N. Y.

9994 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 20, fig. 9.
Manlius beds — Litchfield, N. Y.
On slab with type of *Eurypterus microphthalmus,* pl. 20, fig. 10.

9995 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 20, fig. 10.
Manlius beds Litchfield, N. Y.
On slab with type of *Eurypterus microphthalmus,* pl. 20, fig. 9.

Eurypterus myops see **Stylonurus myops**

Eurypterus myops (in error) see **Dolichopterus otisius**

Eurypterus pittsfordensis Sarle

9996 HYPOTYPE *Eurypterus pittsfordensis* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 196; pt 2, pl. 13, fig. 5.
Pittsford sh. Pittsford, Monroe co. N. Y.
C. J. Sarle purchase

9997 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 14, fig. 1.
Pittsford sh. Pittsford, N. Y.

Eurypterus pristinus Clarke & Ruedemann

9998 HOLOTYPE *Eurypterus pristinus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 207; pt 2, pl. 83, fig. 5.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910
On slab with type of *Eurypterus (Dolichopterus) stellatus,* pl. 83, fig. 4.

9999 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 6.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

Eurypterus pustulosus Hall

10000 HYPOPLASTOTYPE *Eurypterus pustulosus* Hall. Pal. N. Y. 1859. 3:413.
Eurypterus giganteus Pohlman. Buffalo Soc. Nat. Sci., Bul. 1883. 4:41, pl. 2, fig. 1.
Eurypterus pustulosus Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 201; p. 201, fig. 39; pt 2, pl. 23, fig. 1.
Bertie wl. Buffalo, N. Y.

Eurypterus remipes Dekay

10001 HYPOTYPE *Eurypterus remipes* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 161; pt 2, pl. 4, fig. 3.
Bertie wl. Jerusalem hill, Herkimer co. N. Y.
On slab with type of *Eurypterus remipes,* pl. 8, fig. 2.

10002 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 4, fig. 4.
Bertie wl. Litchfield, N. Y.
M. W. Brown purchase, 1900

10003 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 5, fig. 1.
Bertie wl. Litchfield, N. Y.
D. D. Luther and R. Ruedemann, coll. 1900

10004 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 5, fig. 2.
Bertie wl. Paris hill, Oneida co. N. Y.
R. Ruedemann, coll. 1900

10005 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 5, fig. 3.
Bertie wl. Litchfield, N. Y.

10006 HYPOTYPE: HYPOPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 5, fig. 4.
Bertie wl. Litchfield, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1900

10007 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 5, fig. 5.
Bertie wl. Litchfield, N. Y.

10008 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 5, fig. 6.
Bertie wl. Litchfield, N. Y.

10009 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 5, fig. 7.
Bertie wl. Litchfield, N. Y.
D. D. Luther and R. Reudemann, coll. 1900

10010 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 6, fig. 1.
Bertie wl. Litchfield, N. Y.

10011 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 6, fig. 2.
Bertie wl. Jerusalem hill, Herkimer co. N. Y.

10012 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 6, fig. 3.
Bertie wl. Cranes Corners, Herkimer co. N. Y.

10013 HYPOTYPE Clarke & Ruedemann. N. Y. S. M. Mem. 14. 1912. pt 2, pl. 6, fig. 4.
Bertie wl. Jerusalem hill, N. Y.
D. D. Luther and R. Ruedemann, coll. 1900

10014 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 6, fig. 5.
Bertie wl. Jerusalem hill, N. Y.
On slab with type of *Eurypterus remipes,* pl. 7, fig. 3.

10015 HYPOTYPE: HYPOPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 6, fig. 6.
Bertie wl. Morganville, Genesee co. N. Y.

10016 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 6, fig. 7.
Bertie wl. Cranes Corners, N. Y.
Fred Brawn, coll. 1908

10017 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 6, fig. 8.
Bertie wl. Jerusalem hill, N. Y.

10018 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 1.
Bertie wl. Jerusalem hill, N. Y.

10019 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 2.
Bertie wl. Jerusalem hill, N. Y.
Fred Brawn, coll. 1908

10020 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 3.
Bertie wl. Jerusalem hill, N. Y.
On slab with type of *Eurypterus remipes,* pl. 6, fig. 5.

10021 HYPOTYPE Clarke & Ruedemann. N. Y. S. M.. Mem. 14. 1912. pt 2, pl. 7, fig. 4.
Bertie wl. Cranes Corners, N. Y.
Fred Brawn, coll. 1908

10022 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 5.
Bertie wl. Cranes Corners, N. Y.

10023 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 6.
Bertie wl. Jerusalem hill, N. Y.

10024 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 7.
Bertie wl. Cranes Corners, N. Y.

10025 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 8.
Bertie wl.
Kay's brook near Cedarville, Herkimer co. N. Y.
J. M. Clarke and R. Ruedemann, coll. 1900

10026 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 9.
Bertie wl. Cranes Corners, N. Y.

10027 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 10.
Bertie wl. Jerusalem hill, N. Y.
J. M. Clarke and R. Ruedemann, coll. 1900

10028 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 7, fig. 11.
Bertie wl. Jerusalem hill, N. Y.

10029 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 8, fig. 1.
Bertie wl. Jerusalem hill, N. Y.
Fred Brawn, coll. 1908

10030 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 8, fig. 2.
Bertie wl. Jerusalem hill, N. Y.
On slab with type of *Eurypterus remipes*, pl. 4, fig. 3.

10031 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 8, fig. 3.
Bertie wl. Cranes Corners, N. Y.

10032 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 8, fig. 4.
Bertie wl. Jerusalem hill, N. Y.
Ward purchase, 1901

10033 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 8, fig. 5.
Bertie wl. Cedarville, N. Y.

10034 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 8, fig. 6.
Bertie wl. Cranes Corners, N. Y.
Fred Brawn, coll. 1908

10035 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 8, fig. 7.
Bertie wl. Jerusalem hill, N. Y.
M. W. Brown purchase, 1900

Eurypterus ? (Dolichopterus ?) stellatus Clarke & Ruedemann

10037 HOLOTYPE *Eurypterus ? (Dolichopterus ?) stellatus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 211; pt 2, pl. 83, fig. 1.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10038 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 2.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10039 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 3.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10040 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 83, fig. 4.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910
On slab with type of *Eurypterus pristinus,* pl. 83, fig. 5.

Eurysoma newlini see **Carcinosoma newlini**

Eusarcus ? see **Echinognathus**

Eusarcus sp. see **Carcinosoma** sp.

Eusarcus breviceps see **Carcinosoma breviceps**

Eusarcus (?) cicerops see **Carcinosoma (?) cicerops**

Eusarcus linguatus see **Carcinosoma linguatum**

Eusarcus longiceps see **Carcinosoma longiceps**

Eusarcus newlini see **Carcinosoma newlini**

Eusarcus scorpionis see **Carcinosoma scorpione**

Eusarcus triangulatus see **Carcinosoma triangulatum**

Eusarcus trigonus see **Carcinosoma trigonum**

Eusarcus vaningeni see **Carcinosoma vaningeni**

GROSSOPTERUS Stormer

Grossopterus ? inexpectans (Ruedemann)

10211 HOLOTYPE *Pterygotus inexpectans* Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 90; p. 89, fig. 29, 30.
Hamilton (Moscow) Gilboa, N. Y.
R. Ruedemann, coll.

10212 HYPOTYPE *Pterygotus* cf. *inexpectans* Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 91; p. 91, fig. 31.
Hamilton (Moscow) Manorkill, near Gilboa, N. Y.
W. Goldring, coll.

10213 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 227-228. 1921. p. 91, fig. 32.
Catskill beds Near Walton, N. Y.
W. Goldring, coll.

HEMIASPIS Woodward

Hemiaspis (?) eriensis Clarke

10091 HOLOTYPE *Hemiaspis (?) eriensis* Clarke. N. Y. S. M. Bul. 251. 1924. p. 119; p. 119, fig. 2.
Bertie wl. Bennett quarry, East Buffalo, N. Y.

HUGHMILLERIA Sarle

Hughmilleria kilfoylei Ruedemann

10092 HOLOTYPE *Hughmilleria kilfoylei* Ruedemann. Amer. Jour. Sci. 1934. 27:378; p. 376, fig. 4.
Snake Hill sh. Mechanicville, N. Y.
R. Ruedemann, coll. 1899

On slab with type of *Eurypterus hudsonicus,* p. 376, fig. 1.

Hughmilleria magna Clarke & Ruedemann

10093 HOLOTYPE *Hughmilleria magna* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 341; pt 2, pl. 85, fig. 11.
Schenectady beds Schenectady, N. Y.
R. Ruedemann, coll. 1910

10094 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 12.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10095 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 13.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10096 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 14.
Schenectady sh. Rotterdam Junction, N. Y.
R. Ruedemann, coll. 1910

10097 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 15.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10098 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 16.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10099 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 17.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10100 PARATYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 18.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10101 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 19.
Schenectady sh. Duanesburg, N. Y
R. Ruedemann, coll. 1910

Hughmilleria phelpsae Ruedemann

10102 HOLOTYPE *Hughmilleria phelpsae* Ruedemann. N. Y. S. M. Bul. 219-220. 1920. p. 213, pl. 3, fig. 2, 3.
Vernon sh. Pittsford, N. Y.
R. Ruedemann and C. Hartnagel, coll. 1918

10103 PARATYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 1.
Vernon sh. Pittsford, N. Y.
R. Ruedemann and C. Hartnagel, coll. 1918

Hughmilleria pittsfordensis (in error) see **Hughmilleria socialis**

Hughmilleria prisca Ruedemann

10104 HOLOTYPE *Hughmilleria prisca* Ruedemann. Amer. Jour. Sci. 1934. *27*:375; p. 376, fig. 3.
Normanskill sh. Glenmont, N. Y.

Hughmilleria shawangunk Clarke

10105 COTYPE *Hughmilleria shawangunk* Clarke. N. Y. S. M. Bul. 107. 1907. p. 308, pl. 4, fig. 1.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 342; pt 2, pl. 65, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10106 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. 2.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10107 COTYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. 3.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10108 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 4, fig. 4.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10109 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10110 COTYPE: COPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10111 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. 3.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10112 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. 4.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10113 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. 5.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10114 COTYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. 8.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10115 COTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 5, fig. 9.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10116 HYPOTYPE *Eurypterus maria* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 1, fig. 3.
Hughmilleria shawangunk Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10117 HYPOTYPE Segments and joints of *Eurypterus, Hughmilleria* etc. Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10118 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10119 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10120 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 8.
Hughmilleria shawangunk Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10121 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 10.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt. 2, pl. 66, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10122 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10123 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10124 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10125 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64. fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10126 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10127 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10128 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10129 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 64, fig. 13.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10130 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10131 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10132 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10133 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10134 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10135 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10136 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 65, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10137 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10138 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10139 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10140 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10141 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10142 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10143 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10144 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10145 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10146 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10147 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 13.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10148 HYPOTYPE: HYPOPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 66, fig. 14.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10149 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 69, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Hughmilleria shawangunk see **Carcinosoma ? cicerops**

Hughmilleria socialis Sarle

10150 HYPOTYPE *Hughmilleria socialis* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 335; pt 2, pl. 60, fig. 6.
Pittsford sh. Pittsford, N. Y.
R. Ruedemann and H. C. Wardell, coll.

10151 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 60, fig. 7.
Pittsford sh. Pittsford, N. Y.

10152 HYPOTYPE *Hughmilleria pittsfordensis* (in error) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 428, fig. 118.
Pittsford sh. Pittsford, N. Y.
C. J. Sarle purchase, 1899

MIXOPTERUS Ruedemann

Mixopterus multispinosus (Clarke & Ruedemann)

10153 HYPOTYPE *Mixopterus multispinosus* Ruedemann. N. Y. S. M. Bul. 219-220. 1920. p. 208, pl. 1, fig. 3, 4.
Vernon sh. Pittsford, N. Y.
R. Ruedemann and C. Hartnagel, coll. 1918

10154 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 1, fig. 5.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918

10155 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 1, fig. 6.
Stormer. Norske Vid.-Akad. Oslo. Matem.-Naturvid. Kl., Skr. 1933. No. 10, pl. 9, fig. 7. 1934.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918

10156 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 1, fig. 7.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918

10157 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 1.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918
Counterpart of *Mixopterus multispinosus,* pl. 2, fig. 2, 4.

10158 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 2, 4.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918
Counterpart of *Mixopterus multispinosus,* pl. 2, fig. 1.

10159 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 2, fig. 3.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918

10160 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 4.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918

10161 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 5.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918

10162 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 3, fig. 6.
Vernon sh. Pittsford, N. Y.
R. Ruedemann & C. Hartnagel, coll. 1918

Phyllocardia see **Stylonurus** sp. γ

PSEUDONISCUS Nieszkowski

Pseudoniscus clarkei Ruedemann

10163 PARATYPE *Pseudoniscus clarkei* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 107, pl. 33, fig. 8.
Bertie wl. Litchfield, N. Y.

Pseudoniscus roosevelti Clarke

10164 HYPOTYPE *Pseudoniscus roosevelti* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 105, pl. 33, fig. 6.
Pittsford sh. Pittsford, N. Y.

10165 HYPOTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 33, fig. 7.
Pittsford sh. Pittsford, N. Y.

PTERYGOTUS Agassiz

Pterygotus sp.

10166 HYPOTYPE *Pterygotus* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 417, fig. 105.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with types of *Carcinosoma linguatum,* pt 1, p. 414, fig. 97; *Eurypterus chadwicki,* pt 1, p. 413, fig. 95; *Pterygotus* sp., pt 1, p. 417, fig. 107.

10167 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 417, fig. 106.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with types of *Carcinosoma linguatum,* pt 1, p. 414, fig. 96; *Stylonurus modestus,* pt 1, p. 415, fig. 100.

10168 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 417, fig. 107.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with types of *Eurypterus chadwicki,* pt 1, p. 413, fig. 95; *Carcinosoma linguatum,* pt 1, p. 414, fig. 97; *Pterygotus* sp., pt 1, p. 417, fig. 105.

Pterygotus ? sp.

10169 HYPOTYPE *Pterygotus ?* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 13.
Shawangunk grit. Otisville, N. Y.
H. C. Wardell, coll. 1906

Pterygotus sp.

10170 HYPOTYPE (original & counterpart) *Pterygotus* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 11.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10171 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 12.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10172 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14 1912. pt 2, pl. 86, fig. 13.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann. coll. 1910

10173 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 14.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann. coll. 1910

10174 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 15.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10175 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 16.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10176 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 17.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10177 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 18.
Schenectady sh. Central Bridge, N. Y.
R. Ruedemann, coll. 1910

10178 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 19.
Schenectady sh. West of Altamont, N. Y.
R. Ruedemann, coll. 1910

10179 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 20.
Schenectady sh. Rotterdam Junction, N. Y.
R. Ruedemann, coll. 1910

10180 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 1.
Schenectady sh. Aqueduct, N. Y.
R. Ruedemann, coll. 1910

10181 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 2.
Schenectady sh. Aqueduct, N. Y.
R. Ruedemann, coll. 1910

10182 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 3.
Schenectady sh. Aqueduct, N. Y.
R. Ruedemann, coll. 1910

10183 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 4.
Schenectady sh. Aqueduct, N. Y.
R. Ruedemann, coll. 1910

10184 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 5.
Schenectady sh. Duanesburg, N. Y.
R. Ruedemann, coll. 1910

10185 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 6.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10186 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 7.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10187 HYPOTYPE: HYPOPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 8.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10188 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 87, fig. 9.
Schenectady sh. Rotterdam Junction, N. Y.
R. Ruedemann, coll. 1910

Pterygotus sp.

10189 HYPOTYPE *Pterygotus* sp. Clarke. N. Y. S. M., Mem. 9, pt 2. 1909. p. 18, pl. 1, fig. 8.
Dalhousie beds Stewart's cove, Dalhousie, N. B.
J. M. Clarke, coll. 1900

Pterygotus sp.

10190 HYPOTYPE *Pterygotus* sp. Ruedemann. N. Y. S. M. Bul. 265. 1925. p. 79, pl. 23, fig. 7.
Akron dol. ("Bullhead") North Buffalo, N. Y.
E. Reinhard, coll.

Pterygotus buffaloensis Pohlman

10191 HYPOTYPE *Pterygotus buffaloensis* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 358; pt 2, pl. 72, fig. 3.
Bertie wl. Buffalo, N. Y.

10192 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 77, fig. 1, 2.
Bertie wl. Buffalo, N. Y.

10193 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pl. 77, fig. 5; pl. 78, fig. 3.
Bertie wl. Buffalo, N. Y.

10194 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 78, fig. 1.
Bertie wl. Buffalo, N. Y.

10195 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 78, fig. 4.
Bertie wl. Buffalo, N. Y.

Pterygotus cobbi Hall var. **juvenis** Clarke & Ruedemann

10196 COTYPE (original & counterpart) *Pterygotus cobbi* var. *juvenis* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 429; p. 429, fig. 119; p. 430, fig. 121.
Bertie wl. Litchfield, N. Y.
C. A. Hartnagel, coll. 1911

10197 COTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 430, fig. 120.
Bertie wl. Litchfield, N. Y.
C. A. Hartnagel, coll. 1911

Pterygotus deepkillensis Ruedemann

10198 HOLOTYPE *Pterygotus deepkillensis* Ruedemann. Amer. Jour. Sci. 1934. 27:379; p. 376, fig. 5.
Deepkill sh. Deep kill, near Melrose, N. Y.

10199 PARATYPE Ruedemann. Amer. Jour. Sci. 1934. 27:376, fig. 6.
Deepkill sh. Deep kill, near Melrose, N. Y.

Pterygotus (Erettopterus) globiceps Clarke & Ruedemann

10200 HOLOTYPE *Eurypterus maria* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 2, fig. 3.
Pterygotus (Erettopterus) globiceps Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 374; pt 2, pl. 82, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10201 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10202 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10203 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10204 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10205 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10206 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10207 PARATYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10208 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10209 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10210 PARATYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 82, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Pterygotus inexpectans see **Grossopterus ? inexpectans**

Pterygotus cf. **inexpectans** see **Grossopterus ? inexpectans**

Pterygotus macrophthalmus Hall

10214 HYPOTYPE *Pterygotus macrophthalmus* Hall. Pal. N. Y. 1859. 3:418.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 350; text figure 71.
Bertie wl. Litchfield, N. Y.
J. M. Clarke and R. Ruedemann, coll.

10215 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 69, fig. 2.
Bertie wl. Litchfield, N. Y.

10216 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 69, fig. 5.
Bertie wl. Litchfield, N. Y.

10217 HYPOTYPE: HYPOPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 69, fig. 6.
Bertie wl. Litchfield, N. Y.

10218 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 69, fig. 7.
Bertie wl. Litchfield, N. Y.

10219 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 70, fig. 1.
Bertie wl. Litchfield, N. Y.

10220 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 70, fig. 2.
Bertie wl. Litchfield, N. Y.

10221 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 71, fig. 1.
Bertie wl. Litchfield, N. Y.

10222 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 71, fig. 2.
Bertie wl. Litchfield, N. Y.
Fred Brawn, coll. 1908

10223 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 71, fig. 3.
Bertie wl. Litchfield, N. Y.

10224 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 71, fig. 4.
Bertie wl. Litchfield, N. Y.

10225 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 71, fig. 5.
Bertie wl. Litchfield, N. Y.
D. D. Luther and R. Ruedemann, coll. 1900

10226 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 71, fig. 8.
Bertie wl. Litchfield, N. Y.

10227 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 71, fig. 9.
Bertie wl. Litchfield, N. Y.
D. D. Luther and R. Ruedemann, coll. 1900

10228 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 71, fig. 10.
Bertie wl. Litchfield, N. Y.
Fred Brawn, coll. 1908

Pterygotus (Carcinosoma ?) nasutus Clarke & Ruedemann

10229 HOLOTYPE (original & counterpart) *Pterygotus (Eusarcus ?) nasutus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 382, 416; pt 2, pl. 86, fig. 6.
Schenectady sh. Dettbarn quarry, Schenectady, N. Y.
R. Ruedemann, coll. 1910

10230 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 416; p. 416, fig. 102.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

10231 PARATYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 416, fig. 103.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with type of *Stylonurus modestus*, pt 1, p. 415, fig. 99.

10232 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 7.
Schenectady sh. Duanesburg, N. Y.
R. Ruedemann, coll. 1910

10233 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 8.
Schenectady sh. Duanesburg, N. Y.
R. Ruedemann, coll. 1910

10234 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 9.
Schenectady sh. Duanesburg, N. Y.
R. Ruedemann, coll. 1910

10235 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 10.
Schenectady sh. Rexford Flats, N. Y.
R. Ruedemann, coll. 1910

Pterygotus (Eusarcus ?) nasutus see Pterygotus (Carcinosoma ?) nasutus

Pterygotus normanskillensis Clarke & Ruedemann

10236 HOLOTYPE *Pterygotus normanskillensis* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. p. 416; p. 416, fig. 104.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

10237 HYPOTYPE Ruedemann. Amer. Jour. Sci. 1934. *27*:379; p. 376, fig. 7.
Normanskill sh. Kenwood, N. Y.
O. H. Reinholt, coll. 1931

10238 HYPOTYPE Ruedemann. Amer. Jour. Sci. 1934. *27*:376, fig. 8.
Normanskill sh. Kenwood, N. Y.
O. H. Reinholt, coll. 1931

Pterygotus ? otisius see Dolichopterus otisius

Pterygotus (?) priscus Ruedemann

10239 HOLOTYPE *Pterygotus (?) priscus* Ruedemann. N. Y. S. M. Bul. 327. 1942. p. 27, fig. 6 (3).
Deepkill sh. Mt Merino, below Hudson, N. Y.
R. Ruedemann and T. Y. Wilson, coll. 1934
On slab with type of *Dolichopterus antiquus,* fig. 6 (2).

Pterygotus prolificus Clarke & Ruedemann

10240 HOLOTYPE *Pterygotus prolificus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 382; pt 2, pl. 86, fig. 3.
Schenectady sh. Rotterdam Junction, N. Y.
R. Ruedemann, coll. 1910

10241 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 1.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10242 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 2.
Schenectady sh. Duanesburg, N. Y.
R. Ruedemann, coll. 1910

10243 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14 1912. pt 2, pl. 86, fig. 4.
Schenectady sh. Rexford Flats, N. Y.
R. Ruedemann, coll. 1910

10244 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 86, fig. 5.
Schenectady sh. Dettbarn quarry, Schenectady, N. Y.
R. Ruedemann, coll. 1910

Pterygotus ? vernonensis Ruedemann

10245 HOLOTYPE *Pterygotus ? vernonensis* Ruedemann. N. Y. S. M. Bul. 219-220. 1920. p. 214, pl 1, fig. 2.
Vernon sh. Pittsford, N. Y.
R. Ruedemann and C. Hartnagel, coll. 1918

10246 PARATYPE Ruedemann. N. Y. S. M. Bul. 219-220. 1920. pl. 1, fig. 1.
Vernon sh. Pittsford, N. Y.
R. Ruedemann and C. Hartnagel, coll. 1918

STRABOPS Beecher

Strabops thacheri Beecher

10247 HOLOPLASTOTYPE *Strabops thacheri* Beecher. Amer. Jour. Sci., n. s. 1901. 12:365.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 152; pt 2, pl. 4, fig. 5; pl. 13, fig. 2.
Potosi ls. St Francois co. Mo.

STYLONURUS Page

Stylonurus ? see **Echinognathus**

Stylonurus ? see **Eurypterid.** Genus undetermined

Stylonurus ? sp. see **Dolichopterus stylonuroides**

Stylonurus ? sp.

10248 HYPOTYPE *Stylonurus ?* sp. Clarke. N. Y. S. M. Bul. 107. 1907. p. 308, pl. 6, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10249 HYPOTYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10250 HYPOTYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Stylonurus sp.

10251 HYPOTYPE *Stylonurus* sp. Clarke. N. Y. S. M. Bul. 107. 1907. p. 308, pl. 7, fig. 1.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 314; pt 2, pl. 53, fig. 20.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10252 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10253 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10254 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10255 HYPOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 7, fig. 5.
Shawangunk grit — Otisville, N. Y.
H. C. Wardell, coll. 1906

10256 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 50, fig. 8.
Shawangunk grit — Otisville, N. Y.
H. C. Wardell, coll. 1906

10257 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 18.
Shawangunk grit — Otisville, N. Y.
H. C. Wardell, coll. 1906

"Stylonurus" sp.

10258 HYPOTYPE *Stylonurus* sp. Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 6.
Schenectady sh. — Schenectady, N. Y.
R. Ruedemann, coll. 1910

10259 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 7.
Schenectady sh. — Schenectady, N. Y.
R. Ruedemann, coll. 1910

10260 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 8.
Schenectady sh. — Schenectady, N. Y.
R. Ruedemann, coll. 1910
On slab with type of *Stylonurus* sp., pl. 85, fig. 10.

10261 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 9.
Schenectady sh. — Aqueduct, N. Y.
R. Ruedemann, coll. 1910

10262 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 10.
Schenectady sh. — Schenectady, N. Y.
R. Ruedemann, coll. 1910
On slab with type of *Stylonurus* sp., pl. 85, fig. 8.

"Stylonurus" sp.

10263 HYPOTYPE *Stylonurus* sp. Ruedemann. N. Y. S. M. Bul. 272. 1926. p. 150, pl. 26, fig. 4.
Whetstone Gulf sh. Near Rome, N. Y.
Rust purchase
On slab with type of *Homotelus stegops,* pl. 22, fig. 8.

Stylonurus sp. *a*

10264 COTYPE *Stylonurus sp. a* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 313; pt 2, pl. 53, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10265 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 10.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10266 COTYPE: COPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10267 COTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Stylonurus sp. *β*

10268 COTYPE *Stylonurus sp. β* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 313; pt 2, pl. 53, fig. 14.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10269 COTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 15.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Stylonurus sp. γ

10270 HOLOTYPE *Phyllocarida* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 13.
Stylonurus sp. γ Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 313; pt 2, pl. 53, fig. 19.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Stylonurus sp. δ

10271 COTYPE *Stylonurus sp.* δ Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 313; pt 2, pl. 53, fig. 6.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10272 COTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10273 COTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 13.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Stylonurus (Ctenopterus) cestrotus (Clarke)

10275 HOLOTYPE *Eurypterus ? cestrotus* Clarke. N. Y. S. M. Bul. 107. 1907. p. 307, pl. 3, fig. 10.
Stylonurus (Ctenopterus) cestrotus Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 288; pt 2, pl. 49, fig. 1.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10276 PARATYPE (original & counterpart) Clarke. N. Y. S. M. Bul. 107. 1907. pl. 3, fig. 8, 9.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 49, fig. 4, 5.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10277 HYPOTYPE Segments of joints of *Eurypterus, Hughmilleria* etc. *(Stylonurus).* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 9.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 50, fig. 7.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10278 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 49, fig. 2.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10279 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 49, fig. 3.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10280 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 50, fig. 1.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10281 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 50, fig. 2.
Shawangunk grit Otisville, N. Y
H. C. Wardell, coll. 1906

10282 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 50, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10283 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 50, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10284 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 50, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906
On slab with type of *Stylonurus myops,* pt 2, pl. 51, fig. 8.

10285 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 50, fig. 6.
Shawangunk grit **Otisville, N. Y.**
H. C. Wardell, coll. 1906

"Stylonurus" ? limbatus Clarke & Ruedemann

10286 HOLOTYPE *Stylonurus ? limbatus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 295; pt 2, pl. 85, fig. 2.
Schenectady sh. Dettbarn quarry, Schenectady, N. Y.
R. Ruedemann, coll. 1910

10287 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 1.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10288 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 3.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10289 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 4.
Schenectady sh. Schenectady, N. Y.
R. Ruedemann, coll. 1910

10290 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 85, fig. 5.
Schenectady sh. Duanesburg, N. Y.
R. Ruedemann, coll. 1910

"Stylonurus" modestus Clarke & Ruedemann

10291 HOLOTYPE *Stylonurus modestus* Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 415; p. 415, fig. 99.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with type of *Pterygotus (Eusarcus ?) nasutus*, pt 1, p. 416, fig. 103.

10292 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 415, fig. 100.
Normanskill sh. Catskill, N. Y.
R. Ruedemann, coll. 1910

On slab with types of *Carcinosoma linguatum,* pt 1, p. 414, fig. 96; *Pterygotus* sp., pt 1, p. 417, fig. 106.

10293 PARATYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 415, fig. 101.
Normanskill sh. Catskill, N. Y.
R. Ruedemann. coll. 1910

Stylonurus (Ctenopterus) multispinosus see Mixopterus multispinosus

Stylonurus myops (Clarke)

10294 HOLOTYPE *Eurypterus myops* Clarke. N. Y. S. M. Bul. 107. 1907. p. 306, pl. 6, fig. 1.

Stylonurus myops Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 300; pt 2, pl. 52, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10295 PARATYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. 2.

Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10296 PARATYPE: PARAPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. 3.

Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10297 PARATYPE: PARAPLASTOTYPE Clarke. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. 5.

Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 4, 14.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10298 HYPOTYPE *Eurypterus* or *Pterygotus ?* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 6, fig. 8.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 13.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10299 HYPOTYPE Segments and joints of *Eurypterus, Hughmilleria* etc. Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 4.
Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10300 HYPOTYPE *Eurypterus maria* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 3, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10301 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10302 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10303 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 3.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10304 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10305 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10306 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10307 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10308 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

On slab with type of *Stylonurus cestrotus,* pt 2, pl. 50, fig. 5.

10309 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 9.
Shawangunk grit Otisville, N. Y.
H C. Wardell, coll. 1906

10310 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 10.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10311 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10312 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10313 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 13.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10314 HYPOTYPE (original & counterpart) Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 51, fig. 14.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10315 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10316 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10317 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 6.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10318 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 8.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10319 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 9.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10320 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 11.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10321 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 52, fig. 12.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10322 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 1.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10323 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 2.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10324 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 4.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10325 HYPOTYPE: HYPOPLASTOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 5.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10326 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 7.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

Tylopterus boylei see **Eurypterus (Tylopterus) boylei**

EURYPTERID. Genus undetermined

10327 HYPOTYPE (original & counterpart) *Stylonurus ?* Clarke. N. Y. S. M. Bul. 107. 1907. pl. 8, fig. 11.
Eurypterid. Genus undetermined. Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 1, p. 314; pt 2, pl. 53, fig. 16.
Shawangunk grit Otisville, N. Y.
H. C. Wardell, coll. 1906

10328 HYPOTYPE Clarke & Ruedemann. N. Y. S. M., Mem. 14. 1912. pt 2, pl. 53, fig. 17.
Shawangunk grit Otisville, N. Y.

PISCES

Acantholepis fragilis see **Eczematolepis fragilis**

Apateacanthus peculiaris see **Atopacanthus peculiaris**

ASTEROLEPIS Eichwald

Asterolepis clarkei Eastman

10329 HOLOTYPE (original & counterpart) *Asterolepis clarkei* Eastman. N. Y. S. M., Mem. 10. 1907. p. 40, pl. 7, fig. 7, 8.
Chapman ss. Chapman plantation, Aroostook co. Me.
O. O. Nylander, coll.

ATOPACANTHUS Hussakof & Bryant

Atopacanthus peculiaris (Hussakof)

10330 COTYPE *Apateacanthus peculiaris* Hussakof. A. M. N. H., Bul. 1913. v. 32, p. 247, pl. 47, fig. 6.
Onondaga beds Franklin, Delaware co. N. Y.

BOTHRIOLEPIS Eichwald

Bothriolepis nitida (Leidy)

10331 HYPOTYPE *Stenacanthus nitidus* Leidy. Phila. Acad. Nat. Sci., Jour. 2d ser. 1856. 3:164.
Bothriolepis nitida Eastman. N. Y. S. M., Mem. 10. 1907. p. 50, pl. 3, fig. 4.
Chemung beds Franklin, N. Y.

10332 HYPOTYPE Eastman. N. Y. S. M., Mem. 10. 1907. pl. 7, fig. 1.
Chemung beds Blossburg, Tioga co. Pa.
Andrew Sherwood, coll. 1871

COCCOSTEUS Agassiz

Coccosteus sp.

10333 HYPOTYPE *Coccosteus* sp. Eastman. N. Y. S. M., Mem. 10. 1907. p. 115, pl. 1, fig. 9.
Onondaga ls. Clifton Springs, N. Y.

Coccosteus angustus (name preoccupied) see **Coccosteus involutus**

Coccosteus canadensis Woodward

10334 HYPOTYPE *Coccosteus canadensis* Woodward. Geol. Mag., dec. 3. 1892. 9:483.

Hussakof. N. Y. S. M. Bul. 158. 1912. p. 127; pl. opposite p. 128.

Up. Devonian sh.

Scaumenac bay near Migouasha, P. Q.

Anthony Plourde, coll.

Coccosteus involutus Bryant

10335 HOLOTYPE *Coccosteus angustus* Bryant (name preoccupied). N. Y. S. M. Bul. 281. 1929. p. 41, fig. 20, 23-27.

Coccosteus involutus Bryant. N. Y. S. M. Bul. 286. 1931. p. 153.

Rhinestreet (Portage) sh. Silver Creek, N. Y.

E. R. Burmaster, don.

CTENACANTHUS Agassiz

Ctenacanthus chemungensis Claypole

10336 HYPOTYPE: HYPOPLASTOTYPE *Ctenacanthus chemungensis* Claypole. Amer. Assoc. Adv. Sci., Pr. 33d Meeting, Phila. 1884. 1885. p. 490 (name only).

Eastman. N. Y. S. M., Mem. 10. 1907. p. 77, pl. 7, fig. 3.

Caster. Bul. Amer. Pal. 1930. v. 15, no. 58, p. 102. pl. 56, fig. 9.

Chemung beds

Between Friendship and Nile, Allegany co. N. Y.

Ctenodus fleischeri see **Dipterus fleischeri**

CYATHASPIS Lankester

Cyathaspis wardelli (Ruedemann)

9612 COTYPE *Anatifopsis wardelli* Ruedemann. N. Y. S. M. Bul. 189. 1916. p. 102, pl. 32, fig. 1.

Guymard qtze Otisville, N. Y.

H. C. Wardell, coll.

9613 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32. fig. 2.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9614 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 3.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9615 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 4.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9616 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 5.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9617 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 6.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9618 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 7.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9619 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 8.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9620 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 9.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9621 cotype Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 10.
Guymard qtze
Otisville, N. Y.
H. C. Wardell, coll.

9622 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 11.
Guymard qtze Otisville, N. Y.
H. C. Wardell, coll.

9623 COTYPE Ruedemann. N. Y. S. M. Bul. 189. 1916. pl. 32, fig. 12.
Guymard qtze Otisville, N. Y.
H. C. Wardell, coll.

DEIROSTEUS Wells

Deirosteus abbreviatus (Eastman)

10337 HOLOTYPE: HOLOPLASTOTYPE *Glyptaspis abbreviata* Eastman. N. Y. S. M., Mem. 10. 1907. p. 147, pl. 13, fig. 1.
Deirosteus abbreviatus Wells. Jour. Pal. 1942. v. 16, no. 5, p. 655, pl. 96, fig. 4.
Sherburne form. Valois (North Hector), N. Y.
D. D. Luther, coll.

DINICHTHYS Newberry

Dinichthys sp. indet.

10338 HOLOTYPE *Dinichthys* sp. indet. Eastman. N. Y. S. M., Mem. 10. 1907. p. 139, pl. 6, fig. 1.
Oneonta beds Franklin, N. Y.

Dinichthys halmodeus (Clarke)

10339 HYPOTYPE *Dinichthys halmodeus* Eastman. N. Y. S. M., Mem. 10. 1907. p. 126, pl. 10, fig. 1.
Marcellus (Cherry Valley ls.) sh.
Hendricks' ledge, west of Manlius, N. Y.

Dinichthys pustulosus Eastman

10340 HYPOTYPE *Dinichthys pustulosus* Eastman. Mus. Comp. Zool., Bul. 1897. 31:38.
Eastman. N. Y. S. M., Mem. 10. 1907. p. 130, pl. 5, fig. 2.
Eastman. Iowa Geol. Surv., Ann. Rep't for 1907. 1908. 18:194, pl. 3, fig. 11.
Oneonta ss. Delhi, Delaware co. N. Y.
H. J. Alden purchase

DIPTERUS Sedgwick & Murchison

Dipterus fleischeri (Newberry)

10341 HYPOTYPE (original & counterpart) *Ctenodus fleischeri* Newberry. N. Y. Acad. Sci., Tr. 1897. 16:302.

Dipterus fleischeri Eastman. N. Y. S. M., Mem. 10. 1907. p. 162, pl. 7, fig. 2.

Eastman. Iowa Geol. Surv., Ann. Rep't for 1907. 1908. 18:225, pl. 2, fig. 16.

Oneonta beds Franklin, Delaware co. N. Y.

ECZEMATOLEPIS S. A. Miller

Eczematolepis fragilis (Newberry)

10342 HYPOTYPE: HYPOPLASTOTYPE *Oracanthus fragilis* Newberry. Nat. Inst., Pr. 1857. n.s. 1:126.

Acantholepis fragilis Eastman. N. Y. S. M., Mem. 10. 1907. p. 79, pl. 3, fig. 1.

Onondaga beds Near Truxton, Cortland co. N. Y.

EUSTHENOPTERON Whiteaves

Eusthenopteron foordi Whiteaves

10343 HYPOTYPE *Eusthenopteron foordii* Whiteaves. Amer. Jour. Sci. 1881. 21:495.

Eusthenopteron foordi Hussakof. N. Y. S. M. Bul. 158. 1912. p. 131; fig. opposite p. 132.

Up. Devonian sh. Migouasha, P. Q.

Anthony Plourde, coll.

FAYOLIA Renault & Zeiller

Fayolia crenulata Moysey

10344 HYPOTYPE *Fayolia crenulata* Moysey. Geol. Soc. London, Quart. Jour. 1910. 66:337.

Crookall. Great Britain Geol. Surv., Mem. Summary Prog. 1929. 1930. pt 3, p. 27, pl. 4, fig. 5.

Horizon unknown (probably Low. Carboniferous)

Locality unknown (probably Warren, Pa.)

Fayolia randalli (Newberry)

10345 HYPOTYPE *Spiraxis randalli* Newberry. N. Y. Acad. Sci., Ann. 1885. v. 3, no. 7, p. 220.

Fayolia randalli Crookall. Great Britain Geol. Surv., Mem. Summary Prog. 1929. 1930. pt 3, p. 26, pl. 2, fig. 1.

Low. Carboniferous Warren, Pa.

10346 HYPOTYPE Crookall. Great Britain Geol. Surv., Mem. Summary Prog. 1929. 1930. pt 3, pl. 4, fig. 6.
Low. Carboniferous Warren, Pa.

Glyptaspis abbreviata see **Deirosteus abbreviatus**

GYRACANTHUS Agassiz

Gyracanthus primaevus Eastman

10347 HOLOTYPE *Gyracanthus primaevus* Eastman. Iowa Geol. Surv., Ann. Rep't for 1907. 1908. 18:114; p. 115, fig. 17.
Stafford ls. Stafford, N. Y.
John Gillard, coll.

Gyracanthus sherwoodi Newberry

10348 HYPOTYPE: HYPOPLASTOTYPE *Gyracanthus sherwoodi* Newberry. U. S. G. S., Mon. 1889. 16:119.
Eastman. N. Y. S. M., Mem. 10. 1907. p. 87, pl. 3, fig. 7.
Eastman. Iowa Geol. Surv., Ann. Rep't for 1907. 1908. v. 18, pl. 3, fig. 1.
Chemung beds
Loose in Ischua township, Cattaraugus co. N. Y.

MACHAERACANTHUS Newberry

Machaeracanthus major Newberry

10349 ONOMATYPE *Machaeracanthus major* Newberry. Nat. Inst., Pr. 1857. n.s. 1:125.
Onondaga ls. Near Waterloo, N. Y.
J. J. Thomas, don.

This specimen was mentioned by James Hall in Geol. N. Y., Rep't 4th Dist. 1843. p. 174.

ONYCHODUS Newberry

Onychodus hopkinsi Newberry

10350 HYPOTYPE: HYPOPLASTOTYPE *Onychodus hopkinsi* Newberry. Nat. Inst., Pr. 1857. n.s. 1:124.
Eastman. N. Y. S. M., Mem. 10. 1907. p. 169, pl. 3, fig. 3.
Eastman. Iowa Geol. Surv., Ann. Rep't for 1907. 1908. v. 18, pl. 1, fig. 3.
Chemung beds Franklin, Delaware co. N. Y.

10351 HYPOTYPE Eastman. N. Y. S. M., Mem. 10. 1907. pl. 9, fig. 1.
Chemung beds Franklin, N. Y.

Onychodus (sigmoides ?) Newberry

10352 HYPOTYPE *Onychodus sigmoides* Newberry. Nat. Inst., Pr. 1857. n.s. 1:124.
Onychodus (sigmoides?) Eastman. N. Y. S. M., Mem. 10. 1907. p. 169, pl. 3, fig. 2.
Eastman. Iowa Geol. Surv., Ann. Rep't for 1907. 1908. v. 18, pl. 1, fig. 11.
Marcellus sh. Oran, Onondaga co. N. Y.
H. H. Smith, coll. 1873

Oracanthus fragilis see **Eczematolepis fragilis**

Phaneropleuron curtum see **Scaumenacia curta**

RHYNCHODUS Newberry

Rhynchodus pertenuis Eastman

10353 HOLOTYPE *Rhynchodus pertenuis* Eastman. Amer. Nat. 1904. 38:297, text fig. 2.
Eastman. N. Y. S. M., Mem. 10. 1907. p. 69, pl. 2, fig. 5, 5a.
Eastman. Iowa Geol. Surv., Ann. Rep't for 1907. 1908. 18:131; p. 132, fig. 19.
Chemung beds Franklin, Delaware co. N. Y.

SCAUMENACIA Traquair

Scaumenacia curta (Whiteaves)

10354 HYPOTYPE *Phaneropleuron curtum* Whiteaves. Can. Nat. 1881. 10:29.
Scaumenacia curta Hussakof. N. Y. S. M. Bul. 158. 1912. p. 134; p. 138, fig. 6.
Up. Devonian Scaumenac bay, P. Q.
Anthony Plourde, coll.

10355 HYPOTYPE Hussakof. N. Y. S. M. Bul. 158. 1912. pl. 2, opposite p. 134.
Up. Devonian Scaumenac bay, P. Q.
Anthony Plourde, coll.

Spiraxis randalli see **Fayolia randalli**

Stenacanthus nitidus see **Bothriolepis nitida**

? ACROLEPIS (Scales)

10356 HYPOTYPE (original & counterpart) Scales Suggestive of *Acrolepis* Bryant (in Ruedemann). G. S. A., Bul. 1929. v. 40, pl. 12, fig. 3.
Permian tillite São Paulo, Brazil
O. A. Derby, don.

CROSSOPTERYGIAN (Tooth)

10357 HYPOTYPE *Crossopterygian* Tooth Bryant (in Ruedemann). G. S. A., Bul. 1929. v. 40, pl. 12, fig. 4.
Permian tillite São Paulo, Brazil
O. A. Derby, don.

FISH (Coprolites)

10358 HYPOTYPE *Fish* Coprolite Ruedemann. G. S. A., Bul. 1929. v. 40, pl. 11, fig. 1.
Permian tillite São Paulo, Brazil
O. A. Derby, don.

10359 HYPOTYPE *Fish* Coprolite Ruedemann. G. S. A., Bul. 1929. v. 40, pl. 11, fig. 2.
Permian tillite São Paulo, Brazil
O. A. Derby, don.

PALAEONISCIDAE (Scales)

10360 HYPOTYPE Scale of *Palaeoniscidae* Bryant (in Ruedemann). G. S. A., Bul. 1929. v. 40, pl. 12, fig. 1.
Permian tillite São Paulo, Brazil
O. A. Derby, don.

10361 HYPOTYPE Scale of *Palaeoniscidae* Bryant (in Ruedemann). G. S. A., Bul. 1929. v. 40, pl. 12, fig. 2.
Permian tillite São Paulo, Brazil
O. A. Derby, don.

MAMMALIA

CASTOROIDES Foster

Castoroides ohioensis Foster

10391 HYPOTYPE (left lower incisor) *Castoroides ohioensis* Foster.
Ohio Geol. Surv., 2d Ann. Rep't. 1838. p. 80-81.
Smith. Amer. Jour. Sci., 4th ser. 1914. v. 38, p. 463; p. 464, fig. 1.
Pleistocene: Cowaselon clay
Lot 10, town of Lenox, Madison co. N. Y.
A. A. Grant, coll.

SUPPLEMENTARY LIST TO DECEMBER 1947

PORIFERA

PHRAGMODICTYA Hall

Phragmodictya catilliformis (Whitfield)

10366 HYPOTYPE *Phragmodictya catilliformis* Hall & Clarke. N. Y. S. M., Mem. 2. 1898. pl. 66, fig. 4.
Keokuk beds Crawfordsville, Ind.
C. Van Deloo, coll. 1867

ANTHOZOA

EMMONSIA Edwards & Haime

Emmonsia tuberosa (Rominger) var.

10386 HYPOTYPE *Favosites tuberosa* var. Hall. Illus. Dev. Foss., N. Y. G. S., Pal. 1877. Corals. pl. 1, fig. 1.
Onondaga ls. Cayuga, Ont. Can.

10387 HYPOTYPE Hall. Illus. Dev. Foss., N. Y. G. S., Pal. 1877. Corals. pl. 4, fig. 1.
Onondaga ls. Cayuga, Ont. Can.

FAVOSITES Lamarck

Favosites hemisphericus (Troost) var.

10388 HYPOTYPE *Favosites hemispherica* var. Hall. Illus. Dev. Foss., N. Y. G. S., Pal. 1877. Corals. pl. 3, fig. 1.
Onondaga ls. Cayuga, Ont. Can.

Favosites hemisphericus var. **turbinatus** see **Favosites turbinatus**

Favosites tuberosus var. see **Emmonsia tuberosa** var.

Favosites turbinatus Billings

10389 HYPOTYPE *Favosites hemispherica* var. *turbinata* Hall. Illus. Dev. Foss., N. Y. G. S., Pal. 1877. Corals. pl. 4, fig. 2.
Onondaga ls. Cayuga, Ont. Can.

GRAPTOZOA

ANISOGRAPTUS Ruedemann

Anisograptus matanensis Ruedemann

10445 HYPOTYPE *Anisograptus matanensis* Ruedemann. G. S. A., Mem. 19. 1947. p. 291, pl. 47, fig. 6.
Matane sh. Matane, Que.
Ward exchange

ASCOGRAPTUS Ruedemann

Ascograptus gracilis Ruedemann

10446 HOLOTYPE *Ascograptus gracilis* Ruedemann. G. S. A., Mem. 19. 1947. p. 262, pl. 39, fig. 21.
Bertie wl. North Buffalo, N. Y.
E. Reinhard, coll.

CLIMACOGRAPTUS Hall

Climacograptus antiquus Lapworth var. **polytheca** Ruedemann

10447 COTYPE *Climacograptus antiquus* var. *polytheca* Ruedemann. G. S. A., Mem. 19. 1947. p. 424, pl. 74, fig. 27, 32.
Normanskill (age) sh.
East of Haystack mt., Castle Hill twp., Aroostook co. Me.
O. O. Nylander, coll. 1934

10448 COTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 74, fig. 28, 36.
Normanskill (age) sh.
East of Haystack mt., Aroostook co. Me.
O. O. Nylander, coll. 1934

10449 COTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 74, fig. 29, 34.
Normanskill (age) sh.
East of Haystack mt., Aroostook co. Me.
O. O. Nylander, coll. 1934

10450 COTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 74, fig. 30, 35.
Normanskill (age) sh.
East of Haystack mt., Aroostook co. Me.
O. O. Nylander, coll. 1934

10451 COTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 74, fig. 31, 33.
Normanskill (age) sh.
East of Haystack mt., Aroostook co. Me.
O. O. Nylander, coll. 1934

Climacograptus eximius Ruedemann

10452 HYPOTYPE *Climacograptus eximius* Ruedemann. G. S. A., Mem. 19. 1947. p. 435, pl. 72, fig. 10.
Normanskill (age) sh.
East of Haystack mt., Castle Hill twp., Aroostook co. Me.
O. O. Nylander, coll. 1934

Climacograptus parvus Hall

10481 HYPOTYPE *Climacograptus parvus* Ulrich & Ruedemann. G. S. A., Bul. 1931. v. 42, p. 597, fig. 7.
Ruedemann. G. S. A., Mem. 19. 1947. p. 433, pl. 1, fig. 14.
Normanskill sh.
One mile southeast of Greendale, Columbia co. N. Y.
R. Ruedemann and C. Kilfoyle, coll. 1929

Climacograptus putillus (Hall)

10482 HYPOTYPE *Graptolithus putillus* Hall. Can. G. S., Can. Organic Remains, dec. 2. 1865. p. 27.
Climacograptus putillus Ruedemann. G. S. A., Mem. 19. 1947. p. 434, pl. 72, fig. 30, 31.
Sylvan sh. Cool creek, Okla.
R. Ruedemann, coll. 1923

10483 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 72, fig. 36 (left), 37.
Sylvan sh. Cool creek, Okla.
R. Ruedemann, coll. 1923

On slab with type of *Climacograptus putillus,* pl. 72, fig. 36 (center), 38.

10484 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 72, fig. 36 (center), 38.
Sylvan sh. Cool creek, Okla.
R. Ruedemann, coll. 1923

On slab with type of *Climacograptus putillus,* pl. 72, fig. 36 (left), 37.

10485 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 72, fig. 36 (right), 39.
Sylvan sh. Cool creek, Okla.
R. Ruedemann, coll. 1923

Climacograptus scharenbergi Lapworth

10453 HYPOTYPE *Climacograptus scharenbergi* Ruedemann. G. S. A., Mem. 19. 1947. p. 438, pl. 1, fig. 10.
Normanskill sh. Mt Merino, near Hudson, N. Y.
C. F. Kilfoyle, coll. 1937

Climacograptus typicalis Hall

8526 HYPOTYPE *Climacograptus typicalis* Ulrich & Ruedemann. G. S. A., Bul. 1931. v. 42, p. 596, fig. 6.
Ruedemann. G. S. A., Mem. 19. 1947. pl. 1, fig. 15.
Viola ls. Near Bromide, Okla.

Climacograptus typicalis Hall var. **crassimarginalis** Ruedemann & Decker

10514 COTYPE *Climacograptus typicalis* var. *crassimarginalis* Ruedemann & Decker. Jour. Pal. 1934. v. 8, no. 3, p. 322, pl. 43, fig. 9.
Climacograptus typicalis Ruedemann. G. S. A., Mem. 19. 1947. p. 441, pl. 91, fig. 8.
Viola ls. Witch Hole, 4 miles southwest of Bromide, Okla.

Climacograptus wilsoni Lapworth

10454 HYPOTYPE *Climacograptus wilsoni* Lapworth. Cat. West. Scot. Foss. 1876.
Ruedemann. G. S. A., Mem. 19. 1947. p. 443, pl. 74, fig. 39.
Magog sh. Castle brook, Magog, P. Q.
Prof. C. H. Richardson, don. 1927

10455 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 74, fig. 40.
Magog sh. Castle brook, Magog, P. Q.
Prof. C. H. Richardson, don. 1927

Coenograptus nitidulus see **Nemagraptus gracilis** cf. var. **nitidulus**

CORYNOIDES Nicholson

Corynoides gracilis Hopkinson var. **maximus** Ruedemann

10486 HOLOTYPE *Corynoides gracilis* var. *maximus* Ruedemann. G. S. A., Mem. 19. 1947. p. 361, pl. 58, fig. 48.
Normanskill sh. One mile below Schodack Landing, N. Y.
R. Ruedemann and W. Goldring, coll. 1927

Corynoides gracilis Hopkinson mut. **perungulatus** Ruedemann

10496 COTYPES (counterpart) *Corynoides gracilis* mut. *perungulatus* Ruedemann. N. Y. S. M., Mem. 11. 1908. pl. 13, fig. 3.
Ruedemann. G. S. A., Mem. 19. 1947. p. 361, pl. 58, fig. 38.
Normanskill sh. Glenmont, Albany co. N. Y.
C. Van Deloo, coll. 1883

CRYPTOGRAPTUS Lapworth

Cryptograptus minimus Ruedemann

10456 HOLOTYPE *Cryptograptus minimus* Ruedemann. G. S. A., Mem. 19. 1947. p. 445, pl. 76, fig. 42, 45.
Schenectady beds Altamont creek, N. Y.
C. A. Hartnagel & R. Ruedemann, coll. 1926

10457 PARATYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 76, fig. 43, 46.
Schenectady beds Altamont creek, N. Y.
C. A. Hartnagel & R. Ruedemann, coll. 1926

10458 PARATYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 76, fig. 44, 47.
Schenectady beds Altamont creek, N. Y.
C. A. Hartnagel & R. Ruedemann, coll. 1926

DENDROGRAPTUS Hall

Dendrograptus gracillimus Ruedemann

10459 HOLOTYPE *Dendrograptus gracillimus* Ruedemann. G. S. A., Mem. 19. 1947. p. 216, pl. 20, fig. 17, 18.
Deepkill sh. Mt Merino, near Hudson, N. Y.
R. Ruedemann & T. Y. Wilson, coll. 1935

Dendrograptus phainotheca Gurley

10460 ONOMATYPE *Dendrograptus phainotheca* (Gurley ms.) Bassler. U. S. N. M., Bul. 65. 1909. p. 11.
Ruedemann. G. S. A., Mem. 19. 1947. p. 218.
Lockport ls. Hamilton, Ont. Can.
C. D. Walcott, coll.

DICELLOGRAPTUS Hopkinson

Dicellograptus complanatus Lapworth

10497 HYPOTYPE *Dicellograptus complanatus* Lapworth. Ann. and Mag. Nat. Hist., ser. 5. 1880. 5:160.
Ruedemann. G. S. A., Mem. 19. 1947. p. 376, pl. 62, fig. 10.
Polk Creek sh. Latimer co. Okla.
V. W. Russom, coll. 1936

Dicellograptus russomi Ruedemann

10487 HOLOTYPE *Dicellograptus russomi* Ruedemann. G. S. A., Mem. 19. 1947. p. 386, pl. 64, fig. 23, 24.
Polk Creek sh. Latimer co. Okla.
V. W. Russom, coll. 1936
On slab with types of *Dicellograptus russomi*, pl. 64, fig. 25-27.

10488 PARATYPE (original & counterpart) Ruedemann. G. S. A., Mem. 19. 1947. pl. 64, fig. 25, 26.
Polk Creek sh. Latimer co. Okla.
V. W. Russom, coll. 1936
On slab with types of *Dicellograptus russomi*, pl. 64, fig. 23, 24, 27.

10489 PARATYPE (original & counterpart) Ruedemann. G. S. A., Mem. 19. 1947. pl. 64, fig. 27.
Polk Creek sh. Latimer co. Okla.
V. W. Russom, coll. 1936
On slab with types of *Dicellograptus russomi*, pl. 64, fig. 23-26.

Dicellograptus sextans (Hall)

10461 HYPOTYPE *Dicellograptus sextans* Ruedemann. G. S. A., Mem. 19. 1947. p. 386, pl. 1, fig. 7; pl. 64, fig. 31.
Normanskill sh. Mt Merino, near Hudson, N. Y.
C. F. Kilfoyle, coll. 1937

DICRANOGRAPTUS Hall

Dicranograptus contortus Ruedemann

10490 HYPOTYPE (original & counterpart) *Dicranograptus contortus* Ruedemann. G. S. A., Mem. 19. 1947. p. 389, pl. 65, fig. 27, 31.
Normanskill (age) sh.
Three Mile hill, Bay of Exploits, Nfld
George R. Heyl, coll. 1934
On slab with type of *Dicranograptus contortus,* pl. 65, fig. 28, 30.

10491 HYPOTYPE (original & counterpart) Ruedemann. G. S. A., Mem. 19. 1947. pl. 65, fig. 28, 30.
Normanskill (age) sh.
Three Mile hill, Bay of Exploits, Nfld
George R. Heyl, coll. 1934
On slab with type of *Dicranograptus contortus,* pl. 65, fig. 27, 31.

Dicranograptus nicholsoni Hopkinson var. **longibasalis** Ruedemann & Decker

10515 PARATYPE *Dicranograptus nicholsoni* var. *longibasalis* Ruedemann & Decker. Jour. Pal. 1934. v. 8, no. 3, p. 313, pl. 41, fig. 10.
Ruedemann. G. S. A., Mem. 19. 1947. p. 393, pl. 67, fig. 3.
Viola ls. Norris ranch, 2 miles south of Franks, Okla.
C. E. Decker, don. 1932

DICTYONEMA Hall

Dictyonema crassibasale Gurley

10274 HYPOTYPE *Dictyonema crassibasale* Ruedemann. G. S. A., Mem. 19. 1947. p. 178, pl. 9, fig. 10.
Lockport ls Hamilton, Ont. Can.

Dictyonema filiramus Gurley

10462 HYPOTYPE *Dictyonema filiramus* Ruedemann. G. S. A., Mem. 19. 1947. p. 180, pl. 8, fig. 14.
Lockport chert Hamilton, Ont. Can.
C. D. Walcott, coll.

Dictyonema flabelliforme (Eichwald) var. **sociale** (Salter)

10463 HYPOTYPE *Graptopora socialis* Salter. Amer. Assoc. Adv. Sci., Pr. 1857. 11:65.

Dictyonema flabelliforme var. *sociale* Ruedemann. G. S. A., Mem. 19. 1947. p. 162, pl. 2, fig. 10.

Matane sh. Matane, Que.

Ward exchange

On slab with type of *Anisograptus matanensis,* Amer. Jour. Sci. 1937. p. 58, fig. 7.

10464 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 2, fig. 11, 12.

Matane sh. Matane, Que.

Ward exchange

10465 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 2, fig. 13.

Matane sh. Matane, Que.

Ward exchange

On slab with type of *Triograptus osloensis,* Amer. Jour. Sci. 1937. p. 58, fig. 4.

Dictyonema perradiatum Gurley var. **schohariae** Ruedemann

10466 HOLOTYPE *Dictyonema perradiatum* var. *schohariae* Ruedemann. G. S. A., Mem. 19. 1947. p. 192, pl. 12, fig. 8, 9.

Schoharie grit Indian Ladder, Albany co. N. Y.

C. A. Hartnagel, coll.

Dictyonema spenceri Gurley

10444 HYPOTYPE *Dictyonema spenceri* (Gurley ms.) Bassler. U. S. N. M., Bul. 65. 1909. p. 36.

Ruedemann. G. S. A., Mem. 19. 1947. p. 188, pl. 9, fig. 8.

Lockport ls. Hamilton, Ont. Can.

DIDYMOGRAPTUS McCoy

Didymograptus pennatulus (Hall)

10467 HYPOTYPE (original & counterpart) *Graptolithus pennatulus* Hall. Can. G. S., Can. Organic Remains, dec. 2. 1865. p. 7.

Didymograptus pennatulus Ruedemann. G. S. A., Mem. 19. 1947. p. 342, pl. 55, fig. 42.

Deepkill sh. Deep kill, N. Y.

C. F. Kilfoyle, coll. 1938

10492 HYPOTYPE (original & counterpart) Ruedemann. G. S. A., Mem. 19. 1947. pl. 55, fig. 43; pl. 56, fig. 30, 31.

Deepkill sh. Deep kill, N. Y.

L. W. Ploger, coll. 1932

Didymograptus subtenuis (Hall)

10468 HYPOTYPE *Didymograptus subtenuis* Ruedemann. G. S. A., Mem. 19. 1947. p. 348, pl. 1, fig. 4.

Normanskill sh. Mt Merino, near Hudson, N. Y.

C. F. Kilfoyle, coll. 1937

DIPLOGRAPTUS McCoy

Diplograptus (Amplexograptus) amplexicaulis (Hall)

10516 HYPOTYPE (counterpart) *Diplograptus (Amplexograptus) amplexicaulis* Ruedemann & Decker. Jour. Pal. 1934. v. 8, no. 3, p. 313, pl. 42, fig. 1, 1a.

Ruedemann. G. S. A., Mem. 19. 1947. p. 411, pl. 70, fig. 14.

Viola ls.

West Spring creek at west end of Arbuckle mts, Okla.

C. E. Decker, don. 1932

Diplograptus (Orthograptus) calcaratus Lapworth

10498 HYPOTYPE *Diplograptus foliaceus* var. *calcaratus* Lapworth. Cat. West. Scot. Foss. 1876. p. 6.

Diplograptus (Orthograptus) calcaratus Ruedemann. G. S. A., Mem. 19. 1947. p. 398, pl. 68, fig. 21.

Polk Creek sh. Latimer co. Okla.

V. W. Russom, coll. 1936

On slab with type of *Diplograptus (Mesograptus) crassitestus,* pl. 71, fig. 8.

Diplograptus crassitestus see **Diplograptus (Mesograptus) crassitestus**

Diplograptus (Mesograptus) crassitestus Ruedemann

10499 HYPOTYPE (original & counterpart) *Diplograptus crassitestus* Ruedemann. N. Y. S. M., Mem. 11. 1908. p. 354.
Diplograptus (Mesograptus) crassitestus Ruedemann. G. S. A., Mem. 19. 1947. p. 415, pl. 71, fig. 8.
Polk Creek sh. Latimer co. Okla.
V. W. Russom, coll. 1936
On slab with type of *Diplograptus (Orthograptus) calcaratus,* pl. 68, fig. 21.

Diplograptus (Glyptograptus) dentatus (Brongniart)

10469 HYPOTYPE *Diplograptus (Glyptograptus) dentatus* Ruedemann. G. S. A., Mem. 19. 1947. p. 404, pl. 69, fig. 6.
Levis sh. Levis, Que.
E. Dorf & R. Ruedemann, coll. 1929

Diplograptus foliaceus var. **calcaratus** see **Diplograptus (Orthograptus) calcaratus**

Diplograptus (Mesograptus) mohawkensis Ruedemann

10365 HOLOTYPE *Diplograptus (Mesograptus) mohawkensis* Ruedemann. N. Y. S. M. Bul. 162. 1912. p. 80; p. 81, fig. 19; pl. 2, fig. 18.
Canajoharie sh. Swartztown creek near Amsterdam, N. Y.
R. Ruedemann, coll. 1910

Graptolithus nilssoni see **Monograptus nilssoni**
Graptolithus pennatulus see **Didymograptus pennatulus**
Graptolithus putillus see **Climacograptus putillus**
Graptopora socialis see **Dictyonema flabelliforme** var. **sociale**

INOCAULIS Hall

Inocaulis multiramus Ruedemann

10470 HOLOTYPE *Inocaulis multiramus* Ruedemann. G. S. A., Mem. 19. 1947. p. 241, pl. 10, fig. 16.
Manlius ls. Alvard quarry, near Jamesville, N. Y.

ISOGRAPTUS Moberg

Isograptus lyra Ruedemann

10493 HOLOTYPE (original & counterpart) *Isograptus lyra* Ruedemann. G. S. A., Mem. 19. 1947. p. 353, pl. 57, fig. 43, 44.
Athens sh. Two miles west of Calera, Ala.
R. S. Poor, coll. 1932

10494 PARATYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 57, fig. 45, 46.
Athens sh. Two miles west of Calera, Ala.
R. S. Poor, coll. 1932

LASIOGRAPTUS Lapworth

Lasiograptus (Thysanograptus) eucharis (Hall)

10471 HYPOTYPE *Lasiograptus (Thysanograptus) eucharis* Ruedemann. G. S. A., Mem. 19. 1947. p. 461, pl. 82, fig. 12, 13.
Canajoharie sh. Cleverdale, Lake George, N. Y.
D. H. Newland, coll. 1935

10517 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 82, fig. 26.
Viola ls. East side of Criner Hills, Okla.
S. Powers and R. Ruedemann, coll. 1923

Lasiograptus (Hallograptus) pusillus Ruedemann

10472 HOLOTYPE *Lasiograptus (Hallograptus) pusillus* Ruedemann. G. S. A., Mem. 19. 1947. p. 466, pl. 80, fig. 51.
Normanskill sh. Mt Merino, near Hudson, N. Y.
C. F. Kilfoyle, coll. 1937

MONOGRAPTUS Geinitz

Monograptus colonus (Barrande) cf. var. compactus Wood

10500 HYPOTYPE *Monograptus colonus* var. *compactus* Wood. Geol. Soc. London, Quart. Jour. 1900. 56:466.
Monograptus colonus cf. var. *compactus* Ruedemann. G. S. A., Mem. 19. 1947. p. 476, pl. 84, fig. 40.
Silurian ss. Aroostook co. Me.
O. O. Nylander, coll.

10501 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 84, fig. 41(=45), 46.
Silurian ss. Aroostook co. Me.
O. O. Nylander, coll.

10502 HYPOTYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 84, fig. 47.
Silurian ss. Aroostook co. Me.
O. O. Nylander, coll.

Monograptus nilssoni (Barrande)

10503 HYPOTYPE *Graptolithus nilssoni* Barrande. Grapt. de Bôheme. 1850. p. 51.
Monograptus nilssoni Ruedemann. G. S. A., Mem. 19. 1947. p. 482, pl. 84, fig. 11, 12.
Silurian ss. drift boulder Woodland, Aroostook co. Me.
O. O. Nylander, coll.

Monograptus nylanderi Ruedemann

10504 HOLOTYPE *Monograptus nylanderi* Ruedemann. G. S. A., Mem. 19. 1947. p. 483, pl. 84, fig. 25, 26.
Silurian sh. Stockholm, Aroostook co. Me.
O. O. Nylander, coll.

10505 PARATYPE Ruedemann. G. S. A., Mem. 19. 1947. pl. 84, fig. 27-29.
Silurian ss. Perham, Aroostook co. Me.
O. O. Nylander, coll.

NEMAGRAPTUS Emmons

Nemagraptus gracilis (Hall) cf. var. **nitidulus** (Lapworth)

10473 HYPOTYPE *Coenograptus nitidulus* Lapworth. Cat. West. Scot. Foss. 1876.
Nemagraptus gracilis cf. var. *nitidulus* Ruedemann. G. S. A., Mem. 19. 1947. p. 370, pl. 61, fig. 15, 16.
Normanskill sh. Mt Merino, near Hudson, N. Y.
R. Ruedemann and T. Y. Wilson, coll. 1935

10474 HYPOTYPE (original & counterpart) Ruedemann. G. S. A., Mem. 19. 1947. pl. 61, fig. 17.
Normanskill sh. Mt Merino, near Hudson, N. Y.
R. Ruedemann and T. Y. Wilson, coll. 1935

NEPHELOGRAPTUS Ruedemann

Nephelograptus rectibrachiatus Ruedemann

10495 HOLOTYPE *Nephelograptus rectibrachiatus* Ruedemann. G. S. A., Mem. 19. 1947. p. 197, pl. 14, fig. 18, 27.
Ottosee sh.
Keith, about 5 miles northeast of Lenoir City, Tenn.
James Cullison, coll. 1935

PALAEODICTYOTA Whitfield

Palaeodictyota flabellata Ruedemann

10475 HOLOTYPE *Palaeodictyota flabellata* Ruedemann. G. S. A., Mem. 19. 1947. p. 272, pl. 29, fig. 17-19.
Lockport ls. Hamilton, Ont. Can.
C. D. Walcott, coll.

PTILOGRAPTUS Hall

Ptilograptus plumosus Hall

10476 HYPOTYPE *Ptilograptus plumosus* Ruedemann. G. S. A., Mem. 19. 1947. p. 247, pl. 33, fig. 8.
Levis sh. Levis, Que.
R. Ruedemann, coll. 1929

TETRAGRAPTUS Salter

Tetragraptus lavalensis see **Tetragraptus (Etagraptus) lavalensis**

Tetragraptus (Etagraptus) lavalensis Ruedemann

10477 HYPOTYPE *Tetragraptus lavalensis* Ruedemann. Naturaliste Canadien. 1935. 62:12
Tetragraptus (Etagraptus) lavalensis Ruedemann. G. S. A., Mem. 19. 1947. p. 313, pl. 52, fig. 15, 16.
Deepkill sh. Mt Merino, near Hudson, N. Y.
R. Ruedemann and T. Y. Wilson, coll. 1935

Tetragraptus (Etagraptus) pacificus Ruedemann

10478 HOLOTYPE *Tetragraptus (Etagraptus) pacificus* Ruedemann. G. S. A., Mem. 19. 1947. p. 314, pl. 52, fig. 26, 27.
Deepkill (age) sh. Colville, Stevens co. Wash.
W. G. Barrett, coll. & don.

THAMNOGRAPTUS Hall

Thamnograptus (?) bartonensis Spencer

10479 HYPOTYPE *Thamnograptus bartonensis* Spencer. Can. Nat. 1878. 8:458, 462.
Thamnograptus (?) bartonensis Ruedemann. G. S. A., Mem. 19. 1947. p. 276, pl. 43, fig. 12, 13.
Lockport ls. Hamilton, Ont. Can.
C. D. Walcott, coll.

TRIOGRAPTUS Monsen

Triograptus osloensis Monsen mut. **minor** Ruedemann

10480 COTYPE *Triograptus osloensis* mut. *minor* Ruedemann. G. S. A., Mem. 19. 1947. pl. 53, fig. 50.
Matane sh. Matane, Que.
Ward exchange

CRINOIDEA

ANAMESOCRINUS Goldring

Anamesocrinus lutheri Goldring

10392 HYPOPLASTOTYPE (cast of mold) *Anamesocrinus lutheri* Goldring. Ann. Carnegie Mus. 1935. v. 24, p. 342, pl. 24, fig. 1.
Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.
E. R. Eller, coll.
Type in Carnegie Mus.

10393 HYPOPLASTOTYPE Goldring. Ann. Carnegie Mus. 1935. v. 24, pl. 24, fig. 3.
Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.
E. R. Eller, coll.
Type in Carnegie Mus.

10394 HYPOPLASTOTYPE Goldring. Ann. Carnegie Mus. 1935. v. 24, pl. 24, fig. 5.
Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.
E. R. Eller, coll.
Type in Carnegie Mus.

10395 HYPOPLASTOTYPE Goldring. Ann. Carnegie Mus. 1935. v. 24, pl. 24, fig. 7.
Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.
E. R. Eller, coll.
Type in Carnegie Mus.

10396 HYPOPLASTOTYPE (cast of mold) Goldring. Ann. Carnegie Mus. 1935. v. 24, pl. 24, fig. 9.
Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.
E. R. Eller, coll.
Type in Carnegie Mus.

AOROCRINUS Wachsmuth & Springer

Aorocrinus sp.

10397 HYPOPLASTOTYPE *Aorocrinus* n. sp. Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, p. 833, pl. 58, fig. 16.
Tully (West Brook member) form.
West Brook, 3 miles south of Sherburne, N. Y.
G. A. Cooper, coll.
Type in U. S. N. M.

Aorocrinus cf. **formosus** Goldring

10398 HYPOPLASTOTYPE *Aorocrinus* cf. *formosus* Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, p. 833, pl. 58, fig. 20.
Tully (West Brook member) form.
West Brook, 3 miles south of Sherburne, N. Y.
G. A. Cooper, coll.
Type in U. S. N. M.

Aorocrinus multicostatus Goldring

10399 HOLOPLASTOTYPE *Aorocrinus multicostatus* Goldring. Ann. Carnegie Mus. 1938. v. 27, p. 109, pl. 6, fig. 2.
Up. Devonian ss.
Along road between Center City, McKean co. and
Kinzua, Warren co. Pa.
E. N. Wallis, coll.
Type in Carnegie Mus.

10400 HOLOPLASTOTYPE Goldring. Ann. Carnegie Mus. 1938. v. 27, pl. 6, fig. 3.
Up. Devonian ss.
Along road between Center City, McKean co. and
Kinzua, Warren co. Pa.
E. N. Wallis, coll.
Type in Carnegie Mus.

10401 HOLOPLASTOTYPE Goldring. Ann. Carnegie Mus. 1938. v. 27, pl. 6, fig. 4.
Up. Devonian ss.
Along road between Center City, McKean co. and Kinzua, Warren co. Pa.
E. N. Wallis, coll.
Type in Carnegie Mus.

Arthracantha cooperi see **Arthroacantha cooperi**
Arthracantha cf. **ithacensis** see **Arthroacantha** cf. **ithacensis**
Arthracantha similis see **Arthroacantha similis**

ARTHROACANTHA Williams

Arthroacantha cooperi (Goldring)

10402 HOLOPLASTOTYPE *Arthracantha cooperi* Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, p. 834, pl. 58, fig. 19.
Tully (West Brook member) form.
West Brook, 3 miles south of Sherburne, N. Y.
G. A. Cooper, coll.
Type in U. S. N. M.

10403 PARAPLASTOTYPE Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, pl. 58, fig. 13.
Tully (West Brook member) form.
West Brook, 3 miles south of Sherburne, N. Y.
G. A. Cooper, coll.
Type in U. S. N. M.

Arthroacantha cf. **ithacensis** Williams

10404 HYPOPLASTOTYPE *Arthroacantha ithacensis* Williams. Amer. Philos. Soc., Pr. 1883. 21:85.
Arthracantha cf. *ithacensis* Goldring. Jour. Pal. 1936. v. 10, no. 1, p. 19, pl. 7, fig. 11.
Moscow form. Werner's quarry, Georgetown, N. Y.
Type in U. S. N. M.

Arthroacantha similis (Goldring)

10405 HOLOPLASTOTYPE *Arthracantha similis* Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, p. 835, pl. 58, fig. 18.
Tully (West Brook member) form.
West Brook, 3 miles south of Sherburne, N. Y.
G. A. Cooper, coll.
Type in U. S. N. M.

CYTTAROCRINUS Goldring

Cyttarocrinus sp. near **jewetti** Goldring

10406 ONOMAPLASTOTYPE *Cyttarocrinus (?) jewetti* Goldring. N. Y. S. M., Mem. 16. 1923. p. 271.

Cyttarocrinus sp. near *jewetti* Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, p. 834.

Tully (West Brook member) form.

West Brook, 3 miles south of Sherburne, N. Y.

G. A. Cooper, coll.

Type in U. S. N. M.

EUTAXOCRINUS Springer

Eutaxocrinus alfredi Goldring

10407 PARAPLASTOTYPE (cast of counterpart of type) *Eutaxocrinus alfredi* Goldring. Ann. Carnegie Mus. 1935. v. 24, p. 339, pl. 23, fig. 2.

Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.

E. R. Eller, coll.

Type in Carnegie Mus.

Eutaxocrinus elleri Goldring

10408 HOLOPLASTOTYPE (cast of mold) *Eutaxocrinus elleri* Goldring. Ann. Carnegie Mus. 1935. v. 24, p. 337, pl. 22, fig. 1.

Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.

E. R. Eller, coll.

Type in Carnegie Mus.

10409 HOLOPLASTOTYPE (cast of mold) Goldring. Ann. Carnegie Mus. 1935. v. 24, pl. 22, fig. 3.

Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.

E. R. Eller, coll.

Type in Carnegie Mus.

10410 PARAPLASTOTYPE (cast of counterpart of type) Goldring. Ann. Carnegie Mus. 1935. v. 24, pl. 22, fig. 6.

Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.

E. R. Eller, coll.

Type in Carnegie Mus.

10411 PARAPLASTOTYPE (cast of counterpart of type) Goldring. Ann. Carnegie Mus. 1935. v. 24, pl. 22, fig. 7.
Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.
E. R. Eller, coll.
Type in Carnegie Mus.

Eutaxocrinus tenuiramosus Goldring

10412 COPLASTOTYPE *Eutaxocrinus tenuiramosus* Goldring. Ann. Carnegie Mus. 1935. v. 24, p. 340, pl. 23, fig. 6.
Chemung (Alfred) sh. Alfred Station, Allegany co. N. Y.
E. R. Eller, coll.
Type in Carnegie Mus.

GENNAEOCRINUS Wachsmuth & Springer

Gennaeocrinus percarinatus Goldring

10413 HOLOPLASTOTYPE *Gennaeocrinus percarinatus* Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, p. 832, pl. 58, fig. 15.
Tully (West Brook member) form.
West Brook, 3 miles south of Sherburne, N. Y.
G. A. Cooper, coll.
Type in U. S. N. M.

10414 PARAPLASTOTYPE Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, pl. 58, fig. 12.
Tully (West Brook member) form.
West Brook, 3 miles south of Sherburne, N. Y.
G. A. Cooper, coll.
Type in U. S. N. M.

GILBERTSOCRINUS Phillips

Gilbertsocrinus cf. **alpenensis** Ehlers

10415 HYPOPLASTOTYPE *Gilbertsocrinus alpenensis* Ehlers. Mich. Univ., Mus. Geol., Contr. 1925. v. 2, no. 6, p. 99.
Gilbertsocrinus cf. *alpenensis* Goldring. Jour. Ja. 1936. v. 10, no. 1, p. 16, pl. 6, fig. 7.
Ludlowville form. Lebanon, N. Y.
Type in U. S. N. M.

10416 HYPOPLASTOTYPE Goldring. Jour. Pal. 1936. v. 10, no. 1, pl. 6, fig. 8.
Ludlowville form. Lebanon, N. Y.
Type in U. S. N. M.

10417 HYPOPLASTOTYPE Goldring. Jour. Pal. 1936. v. 10, no. 1, pl. 6, fig. 10.
Ludlowville form. Lebanon, N. Y.
Type in U. S. N. M.

Gilbertsocrinus intersculptus Goldring

10418 COPLASTOTYPE *Gilbertsocrinus intersculptus* Goldring. Jour. Pal. 1936. v. 10, no. 1, p. 15, pl. 6, fig. 2.
Skaneateles (Berwyn member) form.
Palmer's ravine, West Edmeston, Unadilla valley, N. Y.
Type in U. S. N. M.

10419 COPLASTOTYPE Goldring. Jour. Pal. 1936. v. 10, no. 1, pl. 6, fig. 3.
Skaneateles (Berwyn member) form.
Palmer's ravine, West Edmeston, N. Y.
Type in U. S. N. M.

10420 COPLASTOTYPE Goldring. Jour. Pal. 1936. v. 10, no. 1, pl. 6, fig. 4.
Skaneateles (Berwyn member) form.
Palmer's ravine, West Edmeston, N. Y.
Type in U. S. N. M.

10421 COPLASTOTYPE Goldring. Jour. Pal. 1936. v. 10, no. 1, pl. 6, fig. 5.
Skaneateles (Berwyn member) form.
Palmer's ravine, West Edmeston, N. Y.
Type in U. S. N. M.

10422 COPLASTOTYPE Goldring. Jour. Pal. 1936. v. 10, no. 1, pl. 6, fig. 6.
Skaneateles (Berwyn member) form.
Palmer's ravine, West Edmeston, N. Y.
Type in U. S. N. M.

Gilbertsocrinus rarispinus Goldring

10423 HOLOPLASTOTYPE *Gilbertsocrinus rarispinus* Goldring. Jour. Pal. 1936. v. 10, no. 1, p. 17, pl. 6, fig. 11.
Moscow form. Werner's quarry, Georgetown, N. Y.
Type in U. S. N. M.

Loganocrinus kopfi (in error) see **Logocrinus kopfi**

LOGOCRINUS Goldring

Logocrinus geniculatus Goldring

10424 HYPOPLASTOTYPE *Logocrinus geniculatus* Goldring. Jour. Pal. 1936. v. 10, no. 1, p. 22, pl. 7, fig. 13.
Moscow form. Werner's quarry, Georgetown, N. Y.
Type in U. S. N. M.

Logocrinus kopfi Goldring

10425 HOLOPLASTOTYPE *Loganocrinus kopfi* (in error) Goldring. Bul. Amer. Pal. 1946. v. 31, no. 119, p. 37, pl. 1 (4), fig. 3.
Chemung (Alfred) sh.
Alfred Station, Allegany co. N. Y.
Max J. Kopf, coll.
Type in coll. of Max J. Kopf.

MELOCRINITES Goldfuss

Melocrinites sp.

10426 HYPOPLASTOTYPE *Melocrinus* n. sp. Goldring. Jour. Pal. 1936. v. 10, no. 1, p. 17, pl. 7, fig. 2.
Hamilton group Unadilla valley, N. Y.
C. B. Hunt, coll.
Type in U. S. N. M.

Melocrinites ornatus (Goldring)

10427 HOLOPLASTOTYPE *Melocrinus ornatus* Goldring. Jour. Pal. 1936. v. 10, no. 1, p. 17, pl. 7, fig. 1.
Skaneateles form. Palmer's ravine, West Edmeston, N. Y.
Type in U. S. N. M.

Melocrinus sp. see **Melocrinites** sp.

Melocrinus ornatus see **Melocrinites ornatus**

POTERIOCRINITES Miller

Poteriocrinites (?) **dignatus** (Goldring)

10428 HYPOPLASTOTYPE *Poteriocrinus ? dignatus* Goldring. Jour. Pal. 1936. v. 10, no. 1, p. 22, pl. 7, fig. 10.
Moscow form. Schatz brook, New Berlin, N. Y.
Type in U. S. N. M.

10429 HYPOPLASTOTYPE Goldring. Jour. Pal. 1936. v. 10, no. 1, pl. 7, fig. 12.
Moscow form. Schatz brook, New Berlin, N. Y.
Type in U. S. N. M.

Poteriocrinus ? dignatus see **Poteriocrinites ? dignatus**

SYNBATHOCRINUS Phillips

Synbathocrinus expansus Goldring

10430 HOLOPLASTOTYPE *Synbathocrinus expansus* Goldring (in Cooper & Williams). G. S. A., Bul. 1935. v. 46, no. 5, p. 836, pl. 58, fig. 8.
Tully (West Brook member) form.
West Brook, 3 miles south of Sherburne, N. Y.
G. A. Cooper, coll.
Type in U. S. N. M.

ASTEROIDEA

MESOPALAEASTER Schuchert

Mesopalaeaster (?) parviusculus (Billings)

10507 HOLOPLASTOTYPE *Palaeaster parviusculus* Billings. Can. Nat. and Geol. 1860. v. 5, no. 1, p. 69; fig. p. 69.
Silurian Arisaig, Nova Scotia
Type in Redpath Mus., McGill Univ., Can.

Palaeaster parviusculus see **Mesopalaeaster (?) parviusculus**

BRYOZOA

Stictopora semistriata see **Sulcoretepora semistriata**

SULCORETEPORA d'Orbigny

Sulcoretepora semistriata (Hall)

10506 COTYPE *Stictopora semistriata* Hall. N. Y. S. Geol., Ann. Rep't 2. 1883. pl. 25, fig. 19.
Hall & Simpson. Pal. N. Y. 1887. v. 6, pl. 28, fig. 19.
Onondaga ls. West of Leroy, N. Y.
On slab with types of *Fenestrellina ? nexilis,* N. Y. S. Geol., Ann. Rep't 7, pl. 10, fig. 14, 15; *Taeniodictya ? rhomboidea,* pl. 29, fig. 27, 28.

BRACHIOPODA

HOWELLELLA Kozlowski

Howellella vanuxemi (Hall) var. **hartnageli** Howell

10441 PARATYPE *Howellella vanuxemi* var. *hartnageli* Howell. Wagner Free Inst. Sci., Bul. 1947. v. 22, no. 1, p. 2, pl. 2, fig. 1.
Cobleskill form. Frontenac isl., Cayuga lake, N. Y.
J. M. Clarke & D. D. Luther, coll. 1899

10442 PARATYPE Howell. Wagner Free Inst. Sci., Bul. 1947. v. 22, no. 1, pl. 2, fig. 4.
Cobleskill form. Frontenac isl., Cayuga lake, N. Y.
J. M. Clarke & D. D. Luther, coll. 1899

CEPHALOPODA

BASSLEROCERAS Ulrich & Foerste

Bassleroceras vassarina (Dwight)

10367 HYPOTYPE *Cyrtoceras vassarina* Dwight. Amer. Jour. Sci. 3d ser. 1884. 27:254.
Bassleroceras vassarina Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. p. 40, pl. 6, fig. 7.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10368 HYPOTYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 6, fig. 8.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10369 HYPOTYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 6, fig. 9, 10.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10370 HYPOTYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 6, fig. 11, 12.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

CAYUGOCERAS Flower

Cayugoceras manni Flower

10443 HOLOTYPE *Cayugoceras manni* Flower. Amer. Midl. Nat. 1947. v. 37, no. 1, p. 252, pl. 1, fig. 1-3.
Cobleskill ls. Schoharie, N. Y.

Cyrtoceras vassarina see Bassleroceras vassarina

ENDOCERAS Hall

Endoceras ? wappingerense Ulrich, Foerste, Miller & Unklesbay

10371 HOLOTYPE *Endoceras ? wappingerense* Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. p. 102, pl. 53, fig. 3, 4.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10372 PARATYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 53, fig. 1.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10373 PARATYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 53, fig. 2.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10374 PARATYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 53, fig. 5.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

Endoceras ? warthini Ulrich, Foerste, Miller & Unklesbay

10375 HOLOTYPE *Endoceras ? warthini* Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. p. 103, pl. 49, fig. 1, 2.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

EOTHINOCERAS Ulrich, Foerste, Miller & Unklesbay

Eothinoceras americanum Ulrich, Foerste, Miller & Unklesbay

10376 HOLOTYPE *Eothinoceras americanum* Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. p. 131, pl. 67, fig. 5.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10377 PARATYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 67, fig. 1, 2.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

On slab with type of *Eothinoceras americanum,* pl. 67, fig. 3.

10378 PARATYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 67, fig. 3.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

On slab with type of *Eothinoceras americanum,* pl. 67, fig. 1, 2.

10379 PARATYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 67, fig. 4.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

ORMOCERAS Stokes

Ormoceras becraftense Flower

10384 HOLOTYPE (2 figured sections and opposite sides (polished) and 5 other pieces) *Ormoceras becraftense* Flower. Amer. Midl. Nat. 1945. v. 33, no. 3, p. 699, pl. 4, fig. 3, 4.
Becraft ls. Kalkberg ridge, Catskill, N. Y.
R. H. Flower, coll. & don.

Orthoceras henrietta see **Vassaroceras henrietta**

PARAENDOCERAS Ulrich & Foerste

Paraendoceras dwighti Ulrich, Foerste, Miller & Unklesbay

10380 HOLOTYPE *Paraendoceras dwighti* Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. p. 125, pl. 65, fig. 3.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10381 PARATYPE Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. pl. 2, fig. 12.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

SPYROCERAS Hyatt

Spyroceras giganteum Flower

10385 HOLOTYPE *Spyroceras giganteum* Flower. Amer. Midl. Nat. 1945. v. 33, no. 3, p. 703, pl. 5, fig. 3.
Schoharie grit Wolf hill, Albany co. N. Y.
R. H. Flower, coll. & don.

VASSAROCERAS Ulrich, Foerste, Miller & Unklesbay

Vassaroceras henrietta (Dwight)

10382 ONOMATYPE (Topotype) *Orthoceras henrietta* Dwight. Amer. Jour. Sci., 3d ser. 1884. 27:256.
Vassaroceras henrietta Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. p. 33.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

10383 ONOMATYPE (Topotype) Ulrich, Foerste, Miller & Unklesbay. G. S. A., Spec. P. no. 58. 1944. p. 33.
Rochdale ls. Near Rochdale, N. Y.
W. B. Dwight, coll.

TRILOBITA

Acaste henni see **Acastoides henni**

ACASTOIDES Delo

Acastoides henni (R. Richter)

10431 PLASTOTYPE *Acaste henni* Richter. Beitr. zur Kenntnis Dev. Trilobiten Rhein. Schiefergeb. 1909. p. 95.
Oberkoblenz Daleiden, Germany

ASTEROPYGE Hawle & Corda

Asteropyge (?) allardycae (Clarke)

9697 COTYPE *Cryphaeus (?) allardycae* Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. 1:114, pl. 4, fig. 7.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 5, fig. 6.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors
On slab with type of *Asteropyge (?) allardycae,* pl. 4, fig. 8.

9698 COTYPE: COPLASTOTYPE Clarke. Mon. do Serv. Geol. e Min. do Brasil. 1913. v. 1, pl. 4, fig. 8.
Clarke. N. Y. S. M. Bul. 164. 1913. pl. 5, fig. 6.
Devonian Pebble isl., West Falkland
Gov. and Mrs Allardyce, donors
On slab with type of *Asteropyge (?) allardycae,* pl. 4, fig. 7.

BERKEIA Resser

Berkeia saratogensis Resser

10511 HOLOTYPE *Berkeia saratogensis* Resser. Smithson. Misc. Coll. 1942. v. 103, no. 5, p. 91, pl. 15, fig. 22, 23.
Theresa ss. Greenfield, near Saratoga Springs, N. Y.

10512 PARATYPE Resser. Smithson. Misc. Coll. 1942. v. 103, no. 5, pl. 15, fig. 24.
Theresa ss. Greenfield, near Saratoga Springs, N. Y.

10513 PARATYPE Resser. Smithson. Misc. Coll. 1942. v. 103, no. 5, pl. 15, fig. 25.
Theresa ss. Greenfield, near Saratoga Springs, N. Y.

Cryphaeus (?) allardycae see **Asteropyge (?) allardycae**

DECHENELLA Kayser

Dechenella burmeisteri see **Dechenella (Eudechenella) burmeisteri**

Dechenella (Eudechenella) burmeisteri R. Richter

10432 PLASTOTYPE *Dechenella verneuili* Kayser. Zeitschr. Deutsch. Geol. Gesell. 1880. p. 705, pl. 27, fig. 1.
Dechenella burmeisteri Richter. Beitr. zur Kenntnis Dev. Trilobiten Rhein. Schiefergeb. 1909. p. 27.
Dechenella (Eudechenella) burmeisteri Richter. Senckenb. Naturf. Gesell., Abh. 1912. Bd. 31, p. 297, pl. 19, fig. 16a, b, c.
Stringocephalenkalk Hagen, Germany
Type in Geol. Landesmuseum, Berlin.

10433 PLASTOTYPE Richter. Senckenb. Naturf. Gesell., Abh. 1912 Bd. 31, pl. 19, fig. 19.
Stringocephalenkalk Hagen, Germany
Type in Geol. Landesmuseum, Berlin.

10434 PLASTOTYPE Richter. Senckenb. Naturf. Gesell., Abh. 1912. Bd. 31, pl. 19, fig. 20a, b, c.
Stringocephalenkalk Hagen, Germany
Type in Univ. Breslau.

Dechenella verneuili see **Dechenella (Eudechenella) burmeisteri**

ELVINIA Walcott

Elvinia ruedemanni Resser

10508 HOLOTYPE *Elvinia ruedemanni* Resser. Smithson. Misc. Coll. 1942. v. 103, no. 5, p. 95, pl. 18, fig. 8, 9.
Theresa ss. Greenfield, near Saratoga Springs, N. Y.

10509 PARATYPE Resser. Smithson. Misc. Coll. 1942. v. 103, no. 5, pl. 18, fig. 7.
Theresa dol. Greenfield, near Saratoga Springs, N. Y.
H. P. Cushing, coll.
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10510 PARATYPE Resser. Smithson. Misc. Coll. 1942. v. 103, no. 5, pl. 18, fig. 10.
Theresa ss. Greenfield, near Saratoga Springs, N. Y.

ARACHNIDA

CARCINOSOMA Claypole

Carcinosoma (?) ruedemanni (Flower)

10390 HOLOTYPE (original & counterpart) *Eusarcus (?) ruedemanni* Flower. Amer. Midl. Nat. 1945. v. 34, no. 3, p. 718; p. 718, fig. 1.
Deepkill sh. Deep kill, Rensselaer co. N. Y.
R. H. Flower, don. 1946

Eusarcus (?) ruedemanni see **Carcinosoma (?) ruedemanni**

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HELDERBERG BEDS

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DEERPARK—ONESQUETHAW STAGES

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